

A CONTRIBUTION TO THE FLORA OF THE PUNJAB
PLAINS AND THE ASSOCIATED HILL REGIONS

BY

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PART III.

(Continued from page 379 of this volume).

¹ LXIX. SALVADORACEAE.

283. SALVADORA L.

523. *Salvadora oleoides* Dcne. in Jacquem. Voy. Bot. 140, t. 144.

Locality.—Hissar (Duthie 4191!).

Flowers.—August.

Distribution.—Aden. India—the Punjab, Rajputana and Sind plains, frequent.

LXX. APOCYNACEAE.

284. CARISSA L.

524. *Carissa spinarum* A.DC. Prodr. VIII, 332.

Locality.—Hoshiarpur (* Ait. 286!); Rawalpindi (Ait. 463!).

Fruits.—April.

* With *Cuscuta reflexa* as a parasite.

Distribution.—Drier parts of India. Burma; Ceylon.

525. *Carissa grandiflora* A.DC. Prodr. VIII, 335.

Locality.—Lahore—Ag. Hort. Gdns. (Mustoe 6373!).

Distribution.—S. Africa.

285. RHAZYA DCNE.

526. *Rhazya stricta* Decaisne in Ann. Nat. Sc. Ser. 2, IV, 81 and in Jacquem Voy. Bot. t. 111.

Locality.—Rawalpindi-Attock (Ait. 1076!).

Flowers.—March.

Distribution.—Afghanistan, Baluchistan, Arabia. India—Sind, Peshawar, in the Trans-Indian territory common.

286. HOLARRHENA Br.

527. *Holarrhena antidysenterica* Wall. Cat. 1672.

Locality.—Gurdaspur-Dhunera (Bisram 309!).

Distribution.—Throughout the drier forests of India, tropical Himalaya ascending to 3,500 ft., Malacca.

¹ When numbering the orders the figure XIII was omitted in the first part, hence all order numbers are one ahead of the correct sequence. This has been rectified in this part. The number of orders is thus 117, not 118 as stated (p. 124).

287. WRIGHTIA Br.

528. **Wrightia tinctoria** Br. in Mem. Wern. Soc. I, 73.
Vernacular name.—*Inderjow*.
Locality.—Gurgaon (Holland 54325!).
Fruits.—January.
Distribution.—Burma, Timor. Central India and throughout the Western Peninsula.
529. **Wrightia tomentosa** Roem. & Schultes Syst. IV, 414.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 13617!).
Flowers.—May.
Distribution.—Tropical India ascending to 2,000 ft. in the Himalaya and to 4,000 ft. in the Nilgiris. Burma; Ceylon; Penang.

288. NERIUM L.

530. **Nerium odorum** Soland. in Hort. Kew. ed., V, 1, 297.
Locality.—Rawalpindi (Ait. 464!).
Flowers.—April.
Distribution.—Nepal; Afghanistan; Japan. India—Sind, Central India, W. Himalaya, ascending to 6,500 ft. in Murree.

289. TRACHELOSPERMUM LEMAIRE.

531. **Trachelospermum fragrans** Hk. f.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 14353!).
Flowers.—April.
Distribution.—India—temperate and subtropical Himalaya.
532. **Trachelospermum jasminoides** Lem. Jard. Fleur. I (1851) t. 61.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 14352!).
Flowers.—April.
Distribution.—China.

290. ICHNOCARPUS Br.

533. **Ichnocarpus frutescens** Br. in Hort. Kew. ed., ii, 60.
Locality.—Gurdaspur (496!, 497! Drum's Herb.); Hoshiarpur (Ait. 501!), Lahore—Ag. Hort. Gdns. (Parker 14248!, 7017!).
Flowers.—September.
Distribution.—Java; Australia; Ceylon. Throughout India, ascending to 1-2,000 ft. in W. Himalaya.

LXXI. ASCLEPIADACEAE.

291. CRYPTOLEPIS Br.

534. **Cryptolepis Buchanani** Roem. & Schult. Syst. IV, 409.
Locality.—Rawalpindi-Chaka 3,500 ft. (Jerram 7353!).
Fruits.—February.
Distribution.—Throughout India, ascending Himalaya to 4,000 ft. Ceylon.

292. PERIPLOCA L.

535. **Periploca aphylla** Dcne. in Jacq. Voy. Bot. 109, t. 116.
Locality.—Rawalpindi-Kahuta (Parker 6500!); Kala chitta (Parker 6499!).
Flowers.—March. *Fruits.*—December.

Distribution.—Afghanistan; Persia; Arabia; Nubia. India—Sind, Rajputana, Plains of W. Punjab.

293. *OXYSTELMA Br.*

536. *Oxystelma esculentum Br.*

Vernacular name.—*Makkanvel*.

Locality.—Lahore—*islands in the Ravi near Chung (Parker 13781!, 13779!, 13780!)*.

Flowers.—September.

Distribution.—Ceylon; Java; Ava.—Throughout the plains and lower hills of India.

294. *CALOTROPIS Br.*

537. *Calotropis procera Br.* in Ait. Hort. Kew. ed. 2, II, 78.

Locality.—Peshawar College (*Quizilbash 64!*); Changa Manga (*Kanjilal!*).

Flowers.—January.

Distribution.—Ava; Persia; tropical Africa. India—W. and C. parts, Sind, Rajputana.

295. *PENTATROPIS Br.*

538. *Pentatropis spiralis Dcne.* in Ann. Sc. Nat. 1838, 327, t. 11 E. and in DC. Prodr. VIII, 536.

Locality.—Lahore—*Ag. Hort. Gdns. (*Parker 6832!); Changa Manga (Kanjilal 107!); Kot Lakhat (Parker 14883!); Hissar (Duthie 4204!)*.

Flowers.—February.

* Wild in Ag. Hort. Gdns. and growing over *Salvadora*.

Distribution.—Afghanistan and westwards to the Red Sea and Nubia. India—the Punjab, Sind and eastwards to the Jummna river.

296. *DAEMIA Br.*

539. *Daemia extensa Br.* in Mem. Wern. Soc. I, 50.

Locality.—Hoshiarpur (*Ait. 439!*); Hissar (*Duthie 5233!, 4194!*); Lahore—Changa Manga (*Parker 6846!; Kanjilal!*).

Flowers.—August-April.

Distribution.—Ceylon; Afghanistan. Throughout India, ascending N.-W. Himalaya to 3,000 ft.

297. *HOLSTEMMA Br.*

540. *Holostemma Rheedii Wall.* Pl. As. Rar II, 51 & Cat. 4469.

Locality.—Rawalpindi—*Falconer's Herb.*

Flowers.—August.

Distribution.—Pegu; Burma; India tropical Himalaya, alt. 3-5,000 ft., Deccan Peninsula.

298. *PERGULARIA L.*

541. *Pergularia pallida Wight & Arn.* Contrib. 42.

Locality.—Rawalpindi (*Ait. 466!*).

Flowers.—July-August.

Distribution.—Throughout India. Burma, Ceylon.

299. LEPTADENIA Br.

542. *Leptadenia Spartium* Wight Contrib., 48.

Locality.—Jhind State (Räitt 23972 !, 23973 !); Multan (Duthie 10789 !, Monro 39 !); Hoshiarpur (Holland 7017 !).

Flowers.—September-February.

Distribution.—Baluchistan; Arabia; Egypt; Senegambia. India—the Punjab, Sind, Rajputana, eastwards to Jummna.

300. CEROPEGIA L.

543. *Ceropegia bulbosa* Roxb. Car. Pl. I, 11, t. 7.

Locality.—Hissar (Coldstream).

Flowers.—July.

Distribution.—Western India, the Punjab and Upper Gangetic plain, southwards to Travancore.

LXXII. LOGANIACEAE.

301. BUDDLEIA L.

544. *Buddleia asiatica* Lour. Fl. Cochinch., 72.

Locality.—Rawalpindi—Sangeri 5,000 ft. (Jerram 7534 !, 7533 !); (Ait. 491 !); Gurdaspur—Siyapurkandi (Bisram 841 !).

Flowers.—March-May.

Distribution.—Malay; Cochin-China; China. Throughout India, ascending to 6,000 ft., very common.

545. *Buddleia madagascariensis* Lamk. Encyc. I, 513.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 12948 !); Hoshiarpur. (*Ait. 547).

Flowers.—April.

Distribution.—Madagascar. *Cultivated.

546. *Buddleia Lindleyana* Fortune in Lindl. Bot. Reg. (1844) Misc. 25.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 12949 !).

Flowers.—April.

Distribution.—China.

LXXIII. GENTIANACEAE.

302. ENICOSTEMA BLUME.

547. *Enicostema littorale* Blume Bijl. 848.

Locality.—Multan (Monro 69 !).

Distribution.—Malaya; Trop. Africa; W. Indies. Throughout India, alt. 0-1,500 ft.

303. ERYTHRAEA L. C. RICH.

548. *Erythraea ramosissima* Pers. Syn. I, 283.

Locality.—Peshawar College (Quizibash 16 !).

Distribution.—Kabul; Baluchistan; W. Asia; Egypt. India—the Punjab, alt. 1-2,000 ft.

549. *Erythraea Roxburghii* G. Don. Gen. Syst. IV, 206.

Locality.—Rawalpindi (Ait. 468 !); Lahore (Stewart 2623 !).

Flowers.—May.

Distribution.—Throughout India, ascending to 2,000 ft., common in Bengal plains.

304. GENTIANA L.

550. *Gentiana decemfida* Ham. Don Prodr. 127.

Locality.—Hoshiarpur (Ait. 531!).

Distribution.—India—the Punjab, N.-W. and C. Himalaya, alt. 1-8,000 ft.

LXXIV. BORAGINACEAE.

305. CORDIA L.

551. *Cordia obliqua* Willd. Sp. Pl. I, 1072.

Locality.—Rawalpindi (Ait. 473!).

Flowers.—May.

Distribution.—W. India and the Punjab, frequent. Ceylon; Nicobar. Cultivated.

552. *Cordia Rothii* Roem. & Schult. Syst. IV, 798.

Locality.—Multan (Monro 382!).

Flowers.—April.

Distribution.—Arabia; Abyssinia. W. India, from the Punjab, Hardwar, Rajputana, Sind, to Malabar, frequent.

306. EHRETIA L.

553. *Ehretia acuminata* Br. Prodr. 497.

Locality.—Gurdaspur (Fane 4855!); Hoshiarpur (Ait. 598!).

Flowers.—June.

Distribution.—Ava; Australia; Japan; India—subtropical Himalaya, ascending to 5,000 ft. and adjacent plains, common.

554. *Ehretia laevis* Roxb. Cor. Pl. 42, t. 55 and Fl. Ind. ed. Carey & Wall. II, 341.

Locality.—Hoshiarpur (Ait. 468!).

Distribution.—Persia to China; Australia and Polynesia. Throughout India, in tropical and subtropical regions, common.

555. *Ehretia laevis* Roxb. var. *pubescens*.

Locality.—Hoshiarpur (Ait. 172!).

Distribution.—Throughout India.

556. *Ehretia laevis* Roxb. var. *aspera*.

Locality.—Lahore—Changa Manga (Parker 14355!, 14357!).

Flowers.—October.

On irrigated canal best. A shrub 8-10 ft. high.

Distribution.—India.

557. *Ehretia obtusifolia* Hochst.

Locality.—Rawalpindi (Ait. 84!); Lahore—Changa Manga!

Distribution.—Abyssinia. India—Sind, the Punjab. Baluchistan.

558. *Ehretia buxifolia* Roxb. Cor. Pl. I, 42, t. 57 and in Fl. Ind. ed. Carey and Wall. II, 343.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38696!).

Flowers.—May.

Distribution.—Malaya to Formosa and the Philippines. India—Deccan Peninsula.

307. HELIOTROPIMUM L.

559. *Heliotropium Eichwaldi* Steud; DC. Prodr. IX, 535.

Locality.—Rawalpindi (Ait. 470 !); Lahore (Stewart 2606 !).

Flowers.—April-May.

Distribution.—Central Asia; Australia. India—the Punjab, Sind, Rajputana, in the plains frequent, Kashmir, alt. 5,200 ft.

560. *Heliotropium undulatum* Vahl Symb. I, 13.

Locality.—Lahore (2956 ! Brandis Herb.; Stewart 2583 !, 2592 !); Rawalpindi (Ait. 472 !).

Flowers.—March.

Distribution.—W. Asia; N. Africa. India—the Punjab, Sind, Rajputana, Upper Gangetic plains, alt. 0-1,000 ft., frequent.

561. *Heliotropium paniculatum* Br. Prodr. 494, not of Roxb.

Locality.—Hissar (Harsukh 20690 !).

Flowers.—October.

Distribution.—Ceylon; Siam; Australia. India—Rajputana, Sind, S. Deccan.

562. *Heliotropium strigosum* Willd. Sp. Pl. I, 743.

Locality.—Rawalpindi (Ait. 471 !); Hissar (Duthie 4219 a).

Flowers.—May-August.

Distribution.—W. Asia; Malaya; Australia. Throughout India, very common.

563. *Heliotropium strigosum* Wild. var. *brevifolia*.

Locality.—Lahore (2983 ! Brandis Herb.; Stewart 2809 !, 2584 !, 2506 !, 2810 !, Cleghorn 2642 !).

Flowers.—March-April.

Distribution.—Throughout India, even more abundant than *H. strigosum* type.

308. TRICHODESMA Br.

564. *Trichodesma indicum* Br. Prodr. 496.

Locality.—Rawalpindi—Barrakow (Ait. 479 !); Gurdaspur—Siyapurkandi (Bisram 842 !).

Flowers.—April-May.

Distribution.—Kabul; Baluchistan; Persia; Mauritius. Throughout India, common; not in Bengal plain.

309. CYNOGLOSSUM L.

565. *Cynoglossum furcatum* Wall. in Roxb. Fl. Ind. ed. Carey & Wall II, 6 and Cat. 919.

Locality.—Rawalpindi (Ait. 53 !).

Flowers.—September.

Distribution.—Ceylon; Kabul. Throughout India.

566. *Cynoglossum micranthum* Desf. Cat. Hort. Par. 1804, 220, fide A. DC. Prodr. X, 149.

Locality.—Lahore (Stewart 2808 !).

Flowers.—April.

Distribution.—N. India and the Himalaya, alt. 1-8,000 ft.

310. ECHINOSPERMUM SWARK.

567. *Echinosperrum minimum* Lehm. Asperifol. 126.

Locality.—Rawalpindi—Hurror (Ait. 1085 !).

Flowers.—March.

Distribution.—Kabul; Baluchistan to the Ural Mts. and Altai. India—Punjab, Kashmir, temperate regions.

311. *ROCHELIA REICHB.*

568. *Rochelia stylaris* Boiss. Fl. Orient. IV, 245.

Locality.—Rawalpindi (Ait. 475!).

Flowers.—March.

Distribution.—Kabul. India—Kashmir and adjoining Punjab Plains.

312. *ASPERGO L.*

569. *Aspergo procumbens*. L.

Locality.—Rawalpindi—Fattehganj (Ait. 1084!).

Flowers.—March.

Distribution.—Europe; N. Africa; W. C. and N. Asia. India—Punjab and Kashmir, alt. 1-7,000 ft.

313. *GASTROCOTYLE BUNGE.*

570. *Gastrocotyle hispida* Bunge Rel. Rehm. 405.

Locality.—Rawalpindi (Ait. 1080!).

Flowers.—March.

Distribution.—Egypt to Baluchistan; Kabul and Soongaria. India—Punjab, alt. 1,000 ft.

314. *NONNEA MOENCH.*

571. *Nonnea pulla* Lamk. et. DC. Fl. Fr. III, 626.

Locality.—Rawalpindi (Ait. 1082!, 477!); Lahore (Stewart 2530!, 2579!, 2811!).

Flowers.—April.

Distribution.—C. and E. Europe; W. Asia. India—Punjab Plains.

315. *LITHOSPERMUM L.*

572. *Lithospermum arvense* L. DC. Prodr. X, 74.

Locality.—Rawalpindi (Ait. 474!); Peshawar (Stewart 75!).

Flowers.—March.

Distribution.—Kabul, Siberia to N. Africa, Europe. India.

573. *Lithospermum tenuifolium* L.f. Suppl. 130.

Locality.—Peshawar (Quizilbash 37!).

Distribution.—Kabul, W. Asia to Egypt and Greece. India.

316. *ARNEBIA FORSK.*

574. *Araebia hispidissima* DC. Prodr. X, 94.

Locality.—Lahore (Stewart 2571!, 2572!); Rawalpindi (Ait. 476!).

Flowers.—March.

Distribution.—W. Asia to Egypt and Nubia. India—W. India, alt. 500-3,000 ft., Sind, from the Upper Gangetic plains and Rajputana westwards frequent.

575. *Arnebia Griffithii* Boiss. Fl. Orient IV, 213.

Locality.—Rawalpindi—Hurror (Ait. 1081!).

Flowers.—March.

Distribution.—Baluchistan; Kabul. India—Punjab, Sind.

LXXV. CONVOLVULACEAE.

317. RIVEA CHOIS.

576. *Rivea hypocrateriformis* Chois. Convol. Or. 26 and in DC. Prodr. 326.

Locality.—Hissar (Duthie 4232!).

Flowers.—August.

Distribution.—W. India, in dry forests from Lahore and Bihar to Mysore, common.

318. ARGYREIA LOUR.

577. *Argyreia speciosa* Sweet Hort. Brit. ed. 2, 373.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13791!).

Flowers.—September.

Distribution.—Java, also from China; Mauritius; cultivated. India, alt. 0-1,000 ft.

578. *Argyreia splendens* Sweet Hort. Brit. ed. 2, 373.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 15034!, 15033!).

Flowers.—November.

Distribution.—India—Kashmir mountains.

319. IPOMOEA L.

579. *Ipomoea Quamoclit* L. Bot. Mag. t. 244.

Locality.—Hoisharpur (Ait. 635!).

Distribution.—Common throughout India, in gardens and as a denizen. Native of Tropical America.

580. *Ipomoea hederacea* Jacq. Collect. I, 124 and Ic. Rar. I, t. 36.

Locality.—Rawalpindi—Saidpur (Ait. 208!).

Flowers.—September.

Distribution.—Tropical and subtropical regions of both hemispheres. India both cultivated and apparently wild, common.

581. *Ipomoea eriocarpa* Br. Prodr. 484.

Locality.—Rawalpindi (Ait. 207!).

Flowers.—September.

Distribution.—Ceylon; Afghanistan, and Tropics of the Old World. Throughout India, alt. 0-4,000 ft., common.

582. *Ipomoea bonariensis* Hook. Bot. Mag. t. 3665.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14245!, 14246!).

Flowers.—September.

Distribution.—Argentine.

583. *Ipomoea Learii* Paxt. Mag. Bot. VI (1839) 267.

Locality.—Lahore—Ag. Hort. Gdns. (Mustoe 6372!).

Flowers.—June.

A Garden Plant.

Distribution.—Tropical America.

584. *Ipomoea carnea* Jacq. Enum. Pl. Carib. 13.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13727!, 11448!).

Flowers.—May. *Fruits*.—February.

A Garden Plant.

Distribution.—S. America.

320. CONVULVULUS L.

585. *Convolvulus microphyllus* Sieb. ; Vis. Pl. Aeg—Nub. 12.

Locality.—Montgomery (Parker 13134 !); Multan (Monro 30 !, 349 !, 362 !).
Flowers.—March-October.

Distribution.—Baluchistan to Egypt and Nubia. India—Sind, Rajputana.

586. *Convolvulus pluricaulis* Chois. Convol. Or. 95 and in DC. Prodr. IX 403 (the Plains plant).

Locality.—Lahore (Stewart 2510 !, 2531 !).

Flowers.—March.

Distribution.—India—Sind and plains of Hindustan and Bihar.

587. *Convolvulus pluricaulis* Choiss. var.—*macra*.

Locality.—Rawalpindi (Ait. 481 !).

Flowers.—April.

Distribution.—India—Punjab, common, from 3,000 ft. alt. in Kashmir to Delhi.

588. *Convolvulus arvensis* L. Engl. Bot. t. 312.

Locality.—Rawalpindi (Ait. 480 !); Lahore (3011 !).

Flowers.—April.

Distribution.—Nearly all temperate and subtropical regions. India—Sind, W. India, from Kashmir to the Deccan, a weed of cultivation.

321. EVOLVULUS L.

589. *Evolvulus alsinoides* L.

Locality.—Rawalpindi (Ait. 161 !).

Flowers.—August.

Distribution.—Ceylon, very common; the tropical and subtropical area of the globe; rare in very damp regions. Throughout India, very common.

322. PORANA BURM.

590. *Porana paniculata* Roxb. Cor. Pl. III, 31, t. 235 and Fl. Ind. I, 466 and ed. Carey & Wall. II, 39.

Locality.—Pathankote (Ellis !); Hoshiarpur (Ait. 515 !).

Flowers.—December.

Distribution.—Ceylon; Ava; Java. Throughout India, less common in the South Deccan.

323. CUSCUTA L.

591. *Cuscuta reflexa* Roxb. Cor., Pl. II, 3, t. 104 and Fl. Ind. I, 466 and ed. Carey & Wall. I, 466.

Locality.—Rawalpindi (* Ait. 563 !).

Flowers.—December.

* On *Carissa diffusa*, *Zizyphus vulgaris*, *Acacia robusta*, *Acacia arabica*, *Inga dulcis*, *Linum usitatissimum*, *Duranta* sp., *Jasminum* sp.

Distribution.—Ceylon; Malaya. Throughout India, alt. 0-8,000 ft., Bengal plains abundant.

LXXVI. SOLANACEAE.

324. SOLANUM L.

592. *Solanum nigrum* L.

Locality.—Rawalpindi (Ait. 583 !); Lahore (Stewart 2541 !).

Flowers.—October.

Distribution.—All temperate and tropical parts of the world. Throughout India and Ceylon, alt. 0-7,000 ft., common.

593. **Solanum verbascifolium**

Locality.—Hoshiarpur (Ait. 508!).

Distribution.—S.-E. Asia; Malaya; N. Australia; Tropical Africa. Throughout India, in the tropical and subtropical zone, common.

594. **Solanum torvum** Swartz Prodr. Veg. Ind. Occ. 47.

Locality.—Lahore—Changa Manga (Parker 24329!, 24973!, 24974!, 13728!).

Flowers.—May-December.

Distribution.—Malaya; China; Philippines; Tropical America. Throughout India in the tropical region except the western desert area, very common in Bengal.

595. **Solanum coagulans** Forsk. Fl. Aeg. Arab. 47.

Locality.—Rawalpindi (* Ait. 212!).

Flowers.—September.

* Everywhere.

Distribution.—S.-W. Asia; Arabia; Egypt. India—W. India, Punjab, Sind.

596. **Solanum xanthocarpum** Schrad. & Wendl. Sert. Hanov. I, 8, t. 2.

Locality.—Rawalpindi (Ait. 482!); Lahore (Cleghorn 2648!).

Flowers.—April.

Distribution.—S.-E. Asia; Malaya; Tropical Australia and Polynesia. Throughout India, common.

597. **Solanum gracilipes** Dcne. in Jacquem. Voy. Bot. 113, t. 110.

Locality.—Rawalpindi (Ait. 482!).

Flowers.—March.

Distribution.—Baluchistan. India—W. India, Punjab and Sind.

598. **Solanum hispidum** Pers. Syn. I, 228.

Locality.—Lahore—Ag. Hort. Gdns. (* Parker 21224!).

Fruits.—Globose.

* Cultivated.

Distribution.—Peru.

599. **Solanum macranthum** Dun.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38694!).

Flowers.—April.

Distribution.—Brazil.

600. **Solanum Rantonnetii** Carr.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13610!).

Flowers.—July.

Distribution.—Argentine.

601. **Solanum malacoxylon** Sendt. in Mart. Fl. Bras. X, 52.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 15029!).

Flowers.—July.

Native of Brazil.

Distribution.—Argentine.

325. LYCOPERSICUM MILLER.

602. **Lycopersicum esculentum** Miller.

Locality.—Rawalpindi (Ait. 483!).

Flowers.—May.

Distribution.—India, cultivated and as an escape. Native of Tropical America.

326. WITHANIA PAUQ.

603. *Withania somnifera* Dunal. in DC. Prodr. XIII, Pt. I, 453.

Locality.—Lahore—Changa Manga (Parker 7726 !); Lahore (Stewart 2823 !, 2626 !); Rawalpindi (Ait. 484 !); Peshawar College (Quizilbash 19 !).

Flowers.—March-December.

Distribution.—Mediterranean region, with the Canaries; Cape of Good Hope. Throughout drier subtropical India, frequent in the west and Hindustan, rare in lower Bengal.

327. LYCIUM L.

604. *Lycium europaeum* L.

Locality.—Hissar (Harsukh 20681 !).

Flowers.—October.

Distribution.—Mediterranean region; W. Asia. W. India, alt. 0-5,000 ft., frequent.

328. DATURA L.

605. *Datura Stramonium* L.

Locality.—Rawalpindi (Ait. 210 !).

Flowers.—September.

Distribution.—Nearly throughout the globe, in temperate and warm climate. India—temperate Himalaya.

606. *Datura fastuosa* L. var. *alba*.

Locality.—Lahore—Changa Manga (Parker 24817 !, 20146 !, 24269 !, 24270 !; Stewart 2512 !).

Flowers.—December.

Has increased during the last few years in unirrigated places.

Distribution.—Malaya; Tropical Africa. Throughout India, in waste places, a weed.

607. *Datura Metel* L.

Locality.—Lahore—Changa Manga (Parker 20143 !, 20144 !, 20145 !, 20139 !, 20140 !, 20141 !, 20142 !).

Flowers.—August.

Distribution.—Tropical America, widely naturalised in the Old World. India—W. Himalaya and Mts. of W. Deccan Peninsula, introduced.

329. HYOSCYAMUS L.

608. *Hyoscyamus muticus* L. Mant. 45.

Locality.—Lahore (Stewart 2614 !).

Flowers.—April.

Distribution.—Kabul, westwards to Egypt. India.—W. Punjab, Sind.

330. CESTRUM L.

609. *Cestrum nocturnum* L. Sp. Pl. 191.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 11409 !, 12967 !).

Flowers.—February-April.

8 ft. high.

Distribution.—S. America.

LXXVII. SCROPHULARIACEAE.

331. VERBASCUM L.

610. *Verbascum Thapsus* L.

Locality.—Rawalpindi (Ait. 485!).

Flowers.—April.

Distribution.—India—Temperate Himalaya. Westwards to Britain.

332. CELSIA L.

611. *Celsia coromandeliana* Vahl Symb. III, 79.

Locality.—Hoshiarpur (Ait. 50!); Rawalpindi (Ait. 85!, 487!, 486!); Lahore (Stewart 2802!, 2568!).

Flowers.—March-July.

Distribution.—Afghanistan; Ava; China. Throughout India.

333. LINARIA L.

612. *Linaria ramosissima* Wall. Pl. As. Rar. II, 43, t. 153 and Cat. 3911.

Locality.—Rawalpindi (Ait. 213!); Peshawar College (Quizilbash 50!).

Flowers.—September.

Distribution.—Afghanistan; Ava. Throughout India on rocks and stony places, ascending the hills to 5,000 ft.

613. *Linaria minor* Desf.; Benth. in DC. Prodr. X, 287.

Locality.—Rawalpindi—Hussand and Tilla (Ait. 1089!).

Flowers.—March.

Distribution.—India—the Punjab plains. Westwards to Britain.

334. ANTIRRHINUM L.

614. *Antirrhinum Orontium* L. Benth. in DC. Prodr. X, 290.

Locality.—Rawalpindi, Barrakow (Ait. 485!); Hurrod (1088!).

Flowers.—March-April.

Distribution.—India—the Punjab plains and W. Himalaya ascending to 4,000 ft., an escape in the Nilgiris. Westwards to N. Africa and Britain.

335. SCROPHULARIA L.

615. *Scrophularia scabiosaefolia* Benth. in DC. Prodr. X, 313.

Locality.—Rawalpindi (Ait. 489!).

Flowers.—March.

Distribution.—W. Tibet 10-12,000 ft.; Afghanistan. India—Peshawar hills, W. Himalaya, alt. 10-1,200 ft.

336. MIMULUS L.

616. *Mimulus gracilis* Br. Prodr. 439.

Locality.—Peshawar College (Quizilbash 2!); Rawalpindi (Ait. 490!).

Flowers.—March.

Distribution.—China; Australia; Tropical and S. Africa. India—Punjab plains, W. Himalaya, alt. 1-3,000 ft.

337. MAZUS LOUR.

617. *Mazus rugosus* Lour. Fl. Coch. 386.

Locality.—Lahore (Stewart 2612!); Hoshiarpur (Ait. 51!).

Flowers.—April.

Distribution.—Afghanistan; Java; China; Japan; Philippine Isles. India—Plains in N. India, temperate and subtropical Himalaya.

338. *HERPESTIS GAERTN. f.*

618. *Herpestis Moniera* H. B. & K.

Locality.—Peshawar College (Quizilbash 48!); Hoshiarpur (Ait. 395!); Rawalpindi—Hussan (Ait. 584!).

Flowers.—October.

Distribution.—Marshes throughout India, ascending to 4,000 ft., Punjab to Singapore & Ceylon common. All warm countries.

LXXVIII. OROBANCHACEAE.

339. *CISTANCHE HOFFM. & LINK.*

619. *Cistanche tubulosa* Wight Ic. t. 1420 bis (*C. lutea* in letter press).

Locality.—Multan (* Fitzherbert!; Stewart 2824!).

Flowers.—November.

* Said to be growing on the roots of *Acacia arabica*.

Distribution.—Asia and westwards to Arabia. India—Punjab, Sind, Rajputana.

LXXIX. BIGNONIACEAE.

340. *BIGNONIA L.*

620. *Bignonia capreolata* L. Sp. Pl. 624.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 12975!).

Flowers.—April.

Distribution.—N. America.

341. *TECOMA JUSS.*

621. *Tecoma undulata* G. Don. Gen. Syst. IV. 223.

Locality.—Hoshiarpur (Ait. 260!).

Distribution.—Arabia. India—W. India, alt. 0-3,000 ft., Sind, Baluchistan. Punjab, Gujarat, Rajputana, extending eastwards to Jummna.

622. *Tecoma australis* R. Br.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14873!).

Flowers.—March.

Distribution.—Australia.

623. *Tecoma capensis* Lindl.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13764!).

Flowers.—September.

Distribution.—S. Africa.

624. *Tecoma grandiflora* Delaun.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13654!, 13653!).

Flowers.—May-September.

Distribution.—Indigenous to China and Japan. Cultivated in India in gardens in the plains and on the hills.

625. *Tecoma jasminoides* Lindl.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 12960!).

Flowers.—April.

Distribution.—Australia.

626. **Tecoma radicans** Juss.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13641!).

Flowers.—June.

Distribution.—N. America.

627. **Tecoma Stans** Juss.

Locality.—Jullandur—Phillur Rest House (Parker 8957!).

Flowers.—February.

Distribution.—S. and N. America.

342. DOLICHANDRA Cham.

628. **Dolichandra cynanchoides** Cham.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13626!).

Flowers.—September.

Distribution.—Brazil; S. America.

343. JACARANDA JUSS.

629. **Jacaranda ovalifolia** R. Br.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13188!).

Flowers.—April.

Distribution.—S. America.

344. PHYLLARTHON DC.

630. **Phyllarthron comorense** DC. Prod. IX, 244.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13770!, 13773!, 13776!).

Flowers.—September.

Distribution.—Comoro Islands.

345. KIGELIA DC.

631. **Kigelia pinnata** DC.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13129!).

Flowers.—April.

Distribution.—Tropical Africa.

LXXX. PEDALIACEAE.

346. PEDALIUM L.

632. **Pedaliium Murex** L. DC. Prodr. IX, 256.

Locality.—Gurgaon (Ram Balab 3017!).

Distribution.—Ceylon; Trop. Africa. India—Deccan Peninsula.

LXXXI. ACANTHACEAE.

347. THUNBERGIA L.

633. **Thunbergia fragrans** Roxb. Cor. Pl. I, 47. and Fl. Ind. III, 33.

Locality.—Hoshiarpur (Ait. 489!).

Cultivated.

Distribution.—Ceylon; Malaya to the Philippines and N. Australia. Throughout India, alt. 1-4,000 ft.

348. *HYGROPHILA* Br.

634. *Hygrophilla polysperma* T. Anders. in Journ. Linn. Soc. XI, 456.

Locality.—Hoshiarpur (Ait. 610!).

Distribution.—Kabul. Throughout India in wet places, alt. 0-5,000 ft.

349. *RUELLIA* L.

635. *Ruellia patula* Jacq. Misc. Bot. II, 358 and Ic. Pl. Rar. I, t. 119,

Locality.—Hissar (Duthie 4285!).

Flowers.—August.

Distribution.—India—Deccan Peninsula extending to Sind, Rajputana and Bundelkhand.

350. *DAEDALACANTHUS* T. ANDERS.

636. *Daedalacanthus nervosus* T. Anders. in Journ. Linn. Soc. IX, 487.

Locality.—Rawalpindi—Nand Kot 4,000 ft. (Jerram 7802!, 7806!).

Distribution.—India—base of the Himalaya, alt. 1-3,000 ft. from the Punjab to Bhotan frequent. Cultivated in various tropical countries.

351. *AECHMANTHERA* NEES.

637. *Aechmanthera tomentosa* Nees in Wall. Pl. As. Rar. III, 87.

Locality.—Hoshiarpur (Ait. 540!).

Distribution.—India—Temperate Himalaya, alt. 3-5,000 ft., Kumaon.

352. *STROBILANTHES* BLUME.

638. *Strobilanthes glutinosus* Nees in Wall. Pl. As. Rar. III, and 86 in DC. Prodr. XI, 144.

Locality.—Rawalpindi—Murree 6,000 ft. (Ait.!).

Distribution.—India—Kashmir, Gharwal, Kumaon. Nepal.

639. *Strobilanthes anisophyllus* T. Anders. in Cat. Hort. Calcutt. 43 and in Journ. Linn. Soc. IX, 478.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 11535!).

Flowers.—February.

Distribution.—Himalayas.

353. *BLEPHARIS* JUSS.

640. *Blepharis sindica* Stocks; T. Anders. in Journ. Linn. Soc. IX, 500.

Locality.—Multan (Monro 217!); Hissar (Duthie 4138!; Harsukh 20689!).

Flowers.—August-October.

Distribution.—India—Sind, Punjab, Rajputana.

354. *BARLERIA* L.

641. *Barleria cristata* L. Benth. Fl. Hongk. 262.

Locality.—Rawalpindi (Ait. 215!); Hoshiarpur (Ait. 270!).

Flowers.—September.

Distribution.—Malaya; China. Subtropical India, N.-W. Himalaya, Burma, Central India, Nilgiris common, gardens of India.

355. *LEPIDAGATHIS* WILLD.

642. *Lepidagathis purpuricaulis* Nees in Wall. Pl. As. Rar. III, 96 and Mongr. Lepidg 27.

Locality.—Hoshiarpur (Ait. 590!).

Distribution.—Himalayan Region. Burma.

643. **Lepidagathis hyalina** Nees in Wall. Pl. As. Rar. III, 95 and Mongr. Lepidag. 16.

Locality.—Hoshiarpur (Ait. 591!).

Distribution.—Burma; S. China. Throughout N. India, alt. 0-4,000 ft.

356. JUSTICIA L.

644. **Justicia Gendarussa** Linn. f. Suppl. 85.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13127!).

Flowers.—May.

Distribution.—Malaya and China to the Philippines. Throughout India, often an escape from cultivation.

645. **Justicia quinqueangularis** Koen.; Roxb. Fl. Ind. ed. Carey & Wall, I, 134.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38816!); Rawalpindi (Ait. 218!).

Flowers.—August-September.

Distribution.—India—Central India common, from Bengal & Agra to Belgaum.

357. ADHATODA NEES.

646. **Adhatoda Vasica** Nees in Wall. Pl. As. Rar. III, 103 and in DC. Prodr. XI, 387.

Locality.—Rawalpindi (Ait. 495!).

Flowers.—March.

Distribution.—Malaya, S.-E. Asia. India, common, frequently cultivated.

358. JACOBINIA MORIC.

647. **Jacobinia tinctoria** Hemsl. Biol. Centr. Am. Bot. ii, 522.

Locality.—Lahore—Ag. Hort. Gdns. (Mustoe 6374!); Ferozepore (Peck 3585!, 3393!).

Flowers.—April-June.

Distribution.—Guatemala.

359. RUNGIA NEES.

648. **Rungia parviflora** Nees in Wall. Pl. As. Rar. III, 110 and in DC. Prodr. XI 469, excl. syn.

Locality.—Hoshiarpur (Ait. 479!).

Distribution.—India—S. Deccan Peninsula. Ceylon.

360. DICLIPTERA JUSS.

649. **Dicliptera Roxburghiana**-var. *bupleuroides* Nees in Wall, Pl. As. Rar. III and in DC. Prodr. XI 485, excl. syn. Roxb. (sp.).

Locality.—Rawalpindi (Ait. 217!, 216!); Hoshiarpur (Ait. 247!); Lahore—Changa Manga (Parker 24132!, 24136!).

Flowers.—September-December.

Abundant in sandy places.

Distribution.—Afghanistan. Throughout India in the hills, alt. 1-6,000 ft.; abundant in the north, becoming rare in the Malabar Ghats, in the Himalayas from Kashmir to Upper Assam and Chittagong hills; the Central India.

361 PERISTROPHE NEES.

650. **Peristrophe bicalyculata** Nees in Wall. Pl. As. Rar. III, 11 and DC. Prodr. XI, 496.

Locality.—Multan (Monro 237!).

Distribution.—Tropical Africa. Tropical and subtropical India, from the Punjab, Rajputana, Sind to Assam, Madras very common. Not known from Ceylon.

LXXXII. VERBENACEAE.

362. LANTANA L.

651. **Lantana indica** Roxb. Hort. Beng. 46 and Fl. Ind. III, 89.

Locality.—Rawalpindi (Ait. 87!).

Flowers.—July.

Distribution.—Ceylon. Tropical Africa. Throughout India in the warmer parts common, on the river banks of Bengal one of the commonest weeds. Baluchistan.

652. **Lantana Camara** L.

Locality.—Peshawar College (Quizilbash 60!); Gurdaspur, Madhopur (*Parker 14391!).

Flowers.—November.

* Naturalised and abundant, said to be poisonous to the cattle, which however do not eat these plants and also to camels. Camels are not allowed to browse loose in this district owing to it (abstract from Parker's note).

Distribution.—A native of Tropical America, has run wild in India specially in the Bhabar in U.P. and in W. Peninsula and Ceylon.

363. LIPPIA L.

653. **Lippia nodiflora** Rich. in Michx. Fl. Bor. Amer. II, 15.

Locality.—Peshawar College (Quizilbash 12!); Rawalpindi (Ait. 506!); Lahore (Stewart 2829!).

Flowers.—April-May.

Distribution.—Ceylon; all tropical and warm temperate regions. Throughout India in wet grass, abundant.

364. STACHYTARPHETA VAHL.

654. **Stachytarpheta mutabilis** Vahl.

Locality.—Lahore—Ag. Hort. Gdns. (Mostoe 6375!); Parker (13765!).

Flowers.—September.

Distribution.—Venezuela. W. India.

365. VERBENA L.

655. **Verbena officinalis** L.; Schauer in DC. Prodr. XI, 547.

Locality.—Lahore (Stewart 2620!); Rawalpindi (Ait. 254!).

Flowers.—April-September.

Distribution.—Temperate and subtropical regions. India—Himalaya, alt. 1-6,000 ft. from Kashmir to Bhotan frequent, Bengal plain to the Sunderbunds frequent.

656. **Verbena bonariensis** L.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38863!).

Flowers.—August.

Weed in gardens.

Distribution.—Tropical regions.

657. *Verbena bipinnatifida* Schau.*Locality*.—Lahore—Changa Manga (Parker 19556!).*Flowers*.—May.

A perennial herb cultivated in gardens in the Punjab, e.g. Lahore, Shahdara etc., comes up freely, self sown in moist shady plains. Flowers blue or white. (Parker).

Distribution.—N. America.

366. PETREA HOUST.

658. *Petrea volubilis* Linn. Sp. Fl. 626.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 15030!).*Flowers*.—April.*Distribution*.—Tropical America.

367. CITHAREXYLUM MILL.

659. *Citharexylum quadrangulare* Jacq. Enum. Pl. Carib. 26.*Locality*.—Ferozepore (Barvoin 5608!).*Flowers*.—August.*Distribution*.—W. India.660. *Citharexylum spinosum* Linn. Sp. Pl. 625.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 38780!, 17193!, 17196!).*Flowers*.—August-October.*Distribution*.—Barbados Islands.

368. CALLICARPA L.

661. *Callicarpa macrophylla* Vahl. Symb. III, 13 t. 53.*Locality*.—Rawalpindi 4,000 ft. (Jerram 8496!).*Flowers*.—July.*Distribution*.—Throughout N. and E. India, ascending to 6,000 ft. in the W. Himalaya, Deccan Peninsula.662. *Callicarpa Reevesii* Wall. Cat. 1830.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 13778!); Lawrence Gdns. (Parker 11563!).*Flowers*.—September-November.*Distribution*.—S. China.663. *Callicarpa purpurea* Juss.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 13648!, 13669!).*Flowers*.—June.*Distribution*.—China.

369. TECTONA L. f.

664. *Tectona grandis* Linn f. Suppl. 151.—The Teak, cultivated.*Locality*.—Hoshiarpur (Ait. 490!).*Distribution*.—Burma; Malay Peninsula alt. 500-4,000 ft.; Sumatra; Java. India—W. Deccan Peninsula, alt. 500-4,000 ft., common; from Central India to Orissa.

370. PREMNA L.

665. *Premna scandens* Roxb. Fl. Ind. III, 82.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 13729!).

Flowers.—May.

Distribution.—India—Tarai of N. and E. Bengal, Assam.

666. **Premna latifolia** Roxb. Hort. Beng. 46 and Fl. Ind. III, 76.

Var.—*mucronata* C.B.Cl.

Locality.—Hoshiarpur (Parker 15045 !); Gurdaspur (Fane ex Engincor 4858 !; Bisram 301 !).

Flowers.—June-August.

Distribution.—N. India from Kumaon to Bhotan ascending to 5,000 ft. and spreading into Bengal Plains, common.

371. VITEX L.

667. **Vitex Negundo** L. Roxb. Fl. Ind., III, 70.

Locality.—Hoshiarpur (Ait. 380 !).

Distribution.—Ceylon; Kabul; E. Asia to the Philippines. Throughout India, in the warmer zone a universal plant.

668. **Vitex leucoxyton** Linn. f. Suppl. 293.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13805 !, 13657 !).

Flowers.—May.

Distribution.—S. Deccan Peninsula and Ceylon upto 3,000 ft.

669. **Vitex Agnus-castus** Linn. Sp. Pl. 638.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14385 !).

Flowers.—June-July.

Distribution.—Mediterranean region; Orient.

372. CLERODENDRON L.

670. **Clerodendron inerme** Gaertn. Fruct. I, 271, t. 57, fig. 1.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13650 !).

Flowers.—May.

Distribution.—India and Ceylon near the sea.

671. **Clerodendron phlomoides** Linn. f. Suppl. 292.

Locality.—Lahore—Changa Manga (Parker 13774 !); Hissar (Harsukh 20680 !).

Flowers.—September.

Distribution.—From the N.-W. Himalaya Tarai to Ceylon; general in the drier climates, extending to Bihar and Orissa.

672. **Clerodendron infortunatum** Gaertn. Fruct., I, 271, t. 57, fig. 1.

Locality.—Lahore—Ag. Hort. Gdns. (Mustoe 6381 !).

Flowers.—April.

Distribution.—Malaya. Throughout India, from Gharwal and Assam to Ceylon and Singapore, in the warm region, very common.

673. **Clerodendron Siphonanthus** Br. in Ait. Hort Kew. ed. 2, IV, 65.

Locality.—Hoshiarpur (Ait. 528 !).

An indigenous plant in the low hills also cultivated in gardens (Ait.).

Distribution.—Sumatra; extensively cultivated in both hemispheres. India—Mts. of S. Deccan Peninsula, Kumaon.

674. **Clerodendron fragrans** Ait.

Locality.—Hoshiarpur (Ait. 558 !).

Cultivated.

675. *Clerodendron aculeatum* Linn.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13114!, 6366!).

Flowers.—April.

Distribution.—America.

676. *Clerodendron heterophyllum* R. Br. in Ait. Hort. Kew. ed. II, IV, 64.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38864!, 13769!, 6370!).

Flowers.—August.

Distribution.—Madagascar.

677. *Clerodendron Thomsonae* Balg. in Edinb. New. Phil. Journ. N. S. XV. (1862) 233.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13730!).

Flowers.—May.

Distribution.—Tropical Africa.

373. HOLMSKIOLDIA RETZ.

678. *Holmskioldia sanguinea* Retz. Obs. VI, 31, and in Hoffm. Phyt. Blaett. 35, t. 3.

Locality.—Hoshiarpur (Ait. 559!).

Indigenous in the low hills, forest near Hoshiarpur and also cultivated in gardens and an escape (Ait.).

Distribution.—India—subtropical Himalaya, alt. 0-4,000 ft. from Kumaon to Bhotan.

374. CARYOPTERIS BUNGE.

679. *Caryopteris Waltichiana* Schauer in DC. Prodr. XI, 625.

Locality.—Rawalpindi—Kachut 4,000 ft. (Jerram 7781!, 7780!; Hoshiarpur (Ait. 568!).

Flowers.—April.

Distribution.—India—subtropical Himalaya, alt. 0-4,500 ft., from the Punjab to Bhotan, frequent.

680. *Caryopteris grata* Benth. in Gen. Pl. II, 1158.

Locality.—Rawalpindi—4,500-5,500 ft. (Jerram 8094!); Dhirkot (Jerram 7355!, 7356!, 7327!).

Flowers.—January-February.

Pericarp of fruit red when ripe.

Distribution.—India—Kumaon, below Naini Tal, alt. 4,000 ft.

LXXXIII. LABIATAE.

375. OCIMUM L.

681. *Ocimum americanum* L. Cent. Pl. I, 15; Amoen Acad IV, 276 = *canun*.

Locality.—Pabbi Hills (* Parker 24228!).

Flowers.—December.

* Small shrub 2 ft. high with a different aroma to *basilicum*.

Distribution.—Asia and Tropical Africa.

682. *Ocimum Basilicum* L.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 11536!).

Flowers.—February; Shrubby.

Distribution.—Ceylon; Malacca; hotter W. Asia; Africa; the Malay and Pacific Islands. Throughout tropical and hotter India—cultivated from the Punjab to Ava, indigenous in the Punjab on low hills.

683. *Ocimum gratissimum* L.

Locality.—Lahore—Ag. Hort. Gdns. (*Parker 13660!, 13659!, 13661!).

Flowers.—May.

A shrub 3 ft. high, stem woody.

Distribution.—E. Nepal; Ceylon; Java; Tropical Africa and America. India—Bengal, Chittagong and throughout the Deccan Peninsula.

376. PLECTRANTHUS L'HERIT.

684. *Plectranthus rugosus* Wall. Pl. As. Rar. II, 17 and Cat. 2745.

Locality.—Rawalpindi, Barrakow Trete (Ait. 496!).

Flowers.—August.

Distribution.—Afghanistan. India—W. Himalaya, dry hills from Kashmir to Gharwal, alt. 3-8,000 ft.

377. POGOSTEMON DESF.

685. *Pogostemon plectranthoides* Desf. in Ann. Mus. II, 156, t. 6.

Locality.—Hoshiarpur (Ait. 472!).

Distribution.—India—W. Himalaya, lower Bengal and Bihar, Konkan, Canara, Circars.

378. MENTHA L.

686. *Mentha sylvestris* Linn.

Locality.—Peshawar College (Quizilbash 461!).

Distribution.—Afghanistan; Temperate Europe and W. and C. Asia. India—Temperate W. Himalaya.

379. THYMUS L.

687. *Thymus vulgaris* Linn. Sp. Pl. 591.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13124!).

Flowers.—May.

Distribution.—S. Europe; N. Asia.

380. MICROMERIA BENTH.

688. *Micromeria biflora* Benth. Lab. 378 and in DC. Prodr. XII, 220.

Locality.—Gurdaspur—Siyaparkandi (Bisram 844!).

Flowers.—May.

Distribution.—Afghanistan; Arabia; Abyssinia; S. Africa. India—tropical and temperate Himalaya, Nilgiri and Anaimalai Hills.

381. MERIANDRA BENTH.

689. *Meriandra bengalensis* Benth. Lab. 189. in Wall. Pl. As. Rar I., 29. and in DC. Prodr. XII, 262.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14872!).

Flowers.—April.

Distribution.—India, cultivated. Native of Abyssinia.

382. SALVIA L.

690. *Salvia plebeia* Br. Prodr. 501.

Locality.—Lahore (Stewart 2897!, 2898!, 2680!, 2622!); Hoshiarpur (Ait. 574!).

Flowers.—April.

Distribution.—China; Malay Islands; Australia. Throughout India, in the plains and ascending the hills to 5,000 ft.

691. *Salvia aegyptiaca* Linn.*Locality*.—Rawalpindi (Ait. 499!).*Flowers*.—April.*Distribution*.—Afghanistan; W. Asia; N. Africa to the Cape Verde Islands. India—Punjab plain, Sind, Rajputana from Delhi westwards, alt., 1-2,000 ft.

383. NEPETA L.

692. *Nepeta graciliflora* Benth. in Wall. Pl. As. Rar. I, 65; Lab. 476 and in DC. Prodr. XII, 382.*Locality*.—Rawalpindi—Mt. Tilea (Ait. 1101!).*Flowers*.—March.*Distribution*.—India—Punjab Plains from Hardwar to the Indus and sub-tropical Himalaya, ascending to 4,000 ft.

384. LALLEMANTIA FISCH & MEY.

693. *Lallemantia Royleana* Benth. in DC. Prodr. XII, 404.*Locality*.—Lahore (Stewart 2567!); Rawalpindi Hussad (Ait. 1100!).*Flowers*.—March.*Distribution*.—Afghanistan; Persia; Turkestan. India—Punjab plains and hills.

385. SCUTELLARIA L.

694. *Scutellaria repens* Ham. in Don. Prodr. 110.*Locality*.—Hoshiarpur (Ait. 543!); Gurdaspur—Dhunera (Bisram 303!).*Flowers*.—June.*Distribution*.—India—subtropical Himalaya, Ava.

386. ANISOMELES Br.

695. *Anisomeles ovata* Br. in Ait. Hort. Kew. ed. 2, II, 364.*Locality*.—Rawalpindi—Barrakow to Trete (Ait. 500!).*Flowers*.—September.*Distribution*.—Malay Archipelago; China; Philippines. Tropical and sub-tropical India, Indus to Assam, ascending the Himalaya to 5,000 ft. and south to Ceylon.

387. STACHYS L.

696. *Stachys parviflora* Benth. in DC. Prodr. XII, 490.*Locality*.—Rawalpindi, Fattehgunj (Ait. 497!, 501!).*Flowers*.—April-August.

It was strongly scented of Peppermint.

Distribution.—Afghanistan. India—Punjab plains and hills, from the Jhelum eastwards and northwards to Murree.

388. OTOSTEGIA BENTH.

697. *Otostegia limbata* Benth. mss.*Locality*.—Rawalpindi, 3,500-5,000 ft. (Jerram 7895!).*Flowers*.—May.*Distribution*.—India—Punjab, lower hills in rocky places west of the Jhelum to the salt range.

389. LEUCAS Br.

698. *Leucas urticaefolia* Br. Prodr. 504.

Locality.—Hissar (Harsukh 20696!).

Flowers.—October.

Distribution.—Arabia: Abyssinia. India—Rajputana, Upper Gangetic Plain, from Patna to the Punjab and southwards to Sind, Coromandel and Malabar. Baluchistan.

390. AJUGA L.

699. *Ajuga bracteosa* Wall. Cat. 2032.

Locality.—Lahore—Changa Manga (Gamble 22497!); Rawalpindi, Barrakow (Ait. 505!).

Flowers.—January-April.

Distribution.—Afghanistan; China; Japan; Abyssinia. India—W. Himalaya alt. 1-7,000 ft. and in the plains near them from Oudh to Peshawar.

LXXXIV. PLANTAGINACEAE.

391. PLANTAGO L.

700. *Plantago amplexicaulis* Cav. Ic. II, 22, t., 125. *var.*—*camphula* Edgew.

Locality.—Lahore (Stewart 2536!, 2537!); Rawalpindi (Ait. 508!).

Flowers.—March-May.

Distribution.—India—Punjab Plains, Sind. Westwards to Greece and Egypt.

701. *Plantago ovata* Forsk. Fl. Aeg. Arab. 31.

Locality.—Rawalpindi (Ait. 507!); Lyallpur (Inayat brother!); Multan (Monro 256!); Lahore (Stewart 2820!, 2535!).

Flowers.—April-November.

Cultivated in Jalalpur.

Distribution.—India—Punjab plains and low hills, from the Sutlej westwards. Westwards to Spain and the Canaries.

702. *Plantago Psyllium* L.

Locality.—Peshawar College (Quizilbash 24!), near Khyber Pass at Jamrud (Milne!).

Distribution.—India—N.-W. Punjab. Westwards to Greece and Egypt.

LXXXV. NYCTAGINACEAE.

392. BOERHAAVIA L.

703. *Boerhaavia repens* Linn.

Locality.—Hissar (Duthie 4327!); Lahore (2962!); Multan!

Flowers.—August.

Distribution.—Ceylon; Tropical and subtropical Asia; Africa and America. Throughout India, from the Punjab to Assam and south to Travancore and Singapore, ascends in the hot Himalayan valleys to 7,000 ft.

LXXXVI ILLECEBRACEAE.

393. HERNIARIA L.

704. *Herniaria hirsuta* Linn.

Locality.—Lyallpur (Inayat brother!); Rawalpindi (Ait. 509!).

Flowers.—March.

Distribution.—India—W. Himalaya, from Kashmir to Kumaon alt. 4-8,000 ft., the Punjab from the Sutlej to Peshawar. Westwards to the Atlantic and the Canary Islands.

LXXXVII. AMARANTACEAE.

394. DEERINGIA Br.

705. *Deeringia celosioides* Br. Prodr. 413.*Locality*.—Hoshiarpur (Ait. 510!).*Distribution*.—Malay Islands; China; Australia. India—subtropical Himalaya.

395. CELOSIA L.

706. *Celosia argentea* Linn.*Locality*.—Rawalpindi (Ait. 225!).*Flowers*.—September.*Distribution*.—Tropical Asia; Africa; America. Cultivated or introduced. Throughout India and Ceylon, ascending the hills to 4,000 ft., nowhere really indigenous.

396. BOSIA L.

707. *Bosia Amherstiana* Hook f.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 13618!).*Flowers*.—April.*Distribution*.—India—W. temperate Himalaya, alt. 4-7,000 ft.

397. DIGERA FORSK.

708. *Digera arvensis* Forsk. Fl. Aeg. Arab. 65. Moq. in DC. Prodr, XIII, 2, 324.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 38818!); Hissar (Hursukh 20694!); (Lahore 29!, 2959!); Rawalpindi (Ait. 566!) * Multan (25! Forest Department).

* Average fodder for cattle. No fodder for ponies. Also eaten by poorer classes as vegetable.

Distribution.—Ceylon—N. part of the island; Java; Afghanistan and Baluchistan to Arabia and N. Africa. India—Rajputana, Sind, Bengal and N.-W. India in the plains to Peshawar and the Salt Range, S. Deccan.

398. AMARANTUS L.

709. *Amarantus viridis* Linn. Sp. Pl. 1405.*Locality*.—Multan—Sakmurrat (Monro 28!); Rawalpindi (Ait. 525!).*Flowers*.—April-May.*Distribution*.—All tropical and warm countries. Throughout India in waste places.710. *Amarantus Blitum* Linn. Sp. Pl. 990.*Locality*.—Lahore (24! Forest Department; 3000! Brandis Herb.; Stewart 2818!, 2817!; Cleghorn 2655!); Rawalpindi (Ait. 523!).*Flowers*.—March.*Distribution*.—Temperate and tropical regions. Waste places throughout India and Ceylon.711. *Amarantus polygamus* Linn. Amoen. Acad. IV, 294. (not of Roxb.).*Locality*.—Hissar (Duthie 4329!).*Flowers*.—August.*Distribution*.—All hot countries. Throughout India and Ceylon, abundant.

399. PUPALIA JUSS.

712. *Pupalia lappacea* Moq. in DC. Prodr. XIII, 2, 331.

Locality.—Rawalpindi (Ait. 524!); Hoshiarpur (Ait. 37!).

Flowers.—July.

Distribution.—Tropical Asia and Africa. India—Upper Gangetic Valley and Punjab, W. tropical Himalaya, alt. 1-3,000 ft., from Kashmir to Kumaon, Bihar, Sind, Rajputana, Gujarat and the Deccan Peninsula.

400. AERUA FORSK.

713. *Aerua javanica* Juss. in Ann. Mus. XI, 131.

Locality.—Montgomery (Champion 45326!; Parker 10002!); Rawalpindi (Ait. 225!, 226!); Hurroo Bridge—(Ait. 562!, 565!); Lahore (Stewart 2597!, 2596!; Cleghorn 2649!); Hissar (Duthie 4328!; Harsukh 20691!); Multan (Duthie).

Flowers.—October-December.

Distribution.—Burma; Ceylon; westwards to Arabia; W. & E. Tropical Africa, and the Cape Verde Islands. India—from Oudh Terai to the Punjab, Sind, Central India, the Deccan from the Konkan southwards.

714. *Aerua scandens* Wall. Cat. 6911. excl. M.

Locality.—Rawalpindi—Barrakow (Ait. 522); Gurdaspur—Siyapurkandi (Bisram 843!).

Flowers.—May.

Distribution.—China; Malay Islands; Philippines; E. and W. Tropical Africa. India—Plains of Bengal and from Assam to the Punjab, ascending the Himalaya to 5,000 ft. from Kumaon to Bhotan, Central India, Bihar and the summit of Parasnath.

401. ACHYRANTHES L.

715. *Achyranthes aspera* Linn. Sp. Pl. 204.

Locality.—Hissar (Duthie 4331!); Hoshiarpur (Ait. 284!).

Flowers.—August.

Distribution.—Tropical Asia; Africa; Australia and America. Throughout India and Ceylon, an abundant weed in dry places.

402. ALTERNANTHERA FORSK.

716. *Alternanthera sessilis* Br. Prodr. 417.

Locality.—Peshawar (Quizilbash 27!); Hissar (Duthie 4333!); Rawalpindi (Ait. 690!); Lahore (Stewart 2626!, 2819!).

Flowers.—April-October.

Distribution.—All warm countries. Throughout hotter India and Ceylon, in damp places, ascending the Himalaya to 4,000 ft.

LXXXVIII. CHENOPODIACEAE.

403. CHENOPODIUM L.

717. *Chenopodium album* Linn.

Locality.—Peshawar College (Quizilbash 14!); Rawalpindi (Ait. 520!); Barrakow (Ait. 519!); Changa Manga (* Parker 14379!, 14380!).

Flowers.—March-July.

* Worst weed in C. M. It reaches a height of 10 ft. (From Parker's note).

Distribution.—India—Tropical and temperate Himalaya, the plains of Bengal, the Gangetic valley and the Punjab, Sind, Rajputana, Deccan Peninsula. Ubiquitous.

718. **Chenopodium murale** Linn. Sp. Pl. 219.

Locality.—Lahore—(Stewart 2816!); Ag. Hort. Gdns. (Parker 21751!).

Flowers.—March.

Weed in wheat crop.

Distribution.—India—Upper Gangetic valley and the Punjab, Deccan Peninsula. Ceylon, ubiquitous.

719. **Chenopodium Botrys** Linn. Sp. Pl. 219.

Locality.—Rawalpindi, Hurroo (Ait. 588!).

Flowers.—October.

Distribution.—Europe; N. and W. Asia; N. Africa, introduced into America. India—Temperate Himalaya, alt. 4-10,000 ft.

720. **Chenopodium ambrosioides** Linn. Sp. Pl. 219.

Locality.—Rawalpindi (Ait. 223!).

Flowers.—September.

Distribution.—Widely spread in the Old World, introduced into America. India—Bengal, Silhet and the Deccan.

404. SPINACIA L.

721. **Spinacia oleracea** Linn. Sp. Pl. 1027.

Locality.—Lahore (Stewart 2803!).

Flowers.—March.

Distribution.—Cultivated throughout India.

405. ATRIPLEX L.

722. **Atriplex crassifolia** C. A. Mey. in Ledeb. Fl. Alt. IV, 309.

Locality.—Rawalpindi (Ait. 224!).

Flowers.—September.

Distribution.—India—N.-W. India and the Punjab, from Jummna westwards.

723. **Atriplex nummularia** Lindl. in Mitch. Journ. Trop. Austr. (1848) 64.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14880!).

Flowers.—February.

Distribution.—Australia.

406. KOCHIA ROTH.

724. **Kochia prostrata** Schrad. Neue. Journ. 1809, 85.

Locality.—Karnal!

Distribution.—Spain and N. Africa; Siberia; Central Asia. India—western Himalaya, in the dry regions of Kunwar and Zanskar.

725. **Kochia indica** Wight. Ic. t. 1791. Vern. n. Bui.

Locality.—Lahore (Parker 39057!; Stewart 2641!, 2520!); Rawalpindi, Huzroo (Ait. 689!).

Flowers.—March-October.

Abundant in the Punjab and sometimes a troublesome weed. On freshly irrigated somewhat saline soil. After a few years when the salts are washed out of the soil it disappears.

An annual, sometimes reaching 6-8 ft. high. In autumn twigs become rather woody and a tall patch of it is very difficult to break through.

Distribution.—Afghanistan. India—N.-W. India, from Delhi to Indus common, Deccan Peninsula, salt soils at Coimbatore.

407. *SUAEDA FORSK.*

726. *Suaeda fruticosa* Forsk. Fl. Aeg. Arab. 70.

Locality.—Sirsa (Drum 36956!, 36957!); Lahore (Stewart 2812!, 2813!, Cleghorn 2656!).

Flowers.—April-December.

Distribution.—The Atlantic; Africa and America. N.-W. India, from Delhi and throughout the Punjab, westwards to the Indus, common in the plains.

408. *HALOXYLON BUNGE.*

727. *Haloxylon recurvum* Bunge in Boiss. Fl. Orient. IV, 949.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14337!); Sirsa (10096!, 10055!, 10056!, 10057!, 10058!, 10059!, 10060!, 10063!, 10064!, 10066!, 10067!, 10068!, 10069!, 10073!); Multan (Monro!); Salt Range (Naraindas 10061!; Drum 36934!, 3018!).

Flowers.—September-December.

Distribution.—Afghanistan; Yunnan. India—W. Punjab plains and Salt Range ascending to 2,500 ft., Rajputana, Sind.

728. *Haloxylon salicornicum* Bunge in Boiss. Fl. Orient. IV, 949.

Locality.—Peshawar College (Quizilbash 4!); Lahore, Rakh chunian (Parker 14334!).

Flowers.—October.

Distribution.—Afghanistan. India—Rajputana; Sind. Baluchistan.

729. *Haloxylon multiflorum* Bunge in Boiss. Fl. Orient. IX, 949.

Locality.—Multan (Monro).

Flowers.—December.

Distribution.—Afghanistan. India—N.-W. Punjab plains, Rajputana.

409. *SALSOLA L.*

730. *Salsola Kali* Linn.; Boiss. Fl. Orient. IV, 954.

Locality.—Peshawar College (Quizilbash 47!).

Distribution. Atlantic; N. Asia; N. and S. Africa; Australia and N. America. India—N.-W. Punjab.

731. *Salsola foetida* Del. Fl. Aegypt. 57.

Locality.—Lahore—Kot Lakhpat (Parker 14330!, 14331!); Changa' Manga—unirrigated area (Parker 14332!, 14333!; Gamble 22495!); Multan (Monro 10794!); Hissar (* Duthie 4335!); Shahpur, Daphar (Parker 2392!); Lahore (Stewart 2521!).

Flowers.—August-March.

Distribution.—Persia; Arabia; N. Africa. India—Punjab plains, upper Gangetic plain, Rajputana, Sind. Baluchistan.

LXXXIX. PHYTOLACCACEAE.

410. *RIVINA PLUM.*

732. *Rivina humilis* Linn. Sp. Pl. 121.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13768!).

Flowers.—September.

Distribution.—Tropical America.

411. PHYTOLACCA L.

733. *Phytolacca dioica* Linn. Sp. Pl. ed II, 631.*Locality*.—Lahore—Ag. Hort. Gdns. (* Parker 38639!, 17194!, 13772!).*Flowers*.—May-October.

* Introduced in 1912 from seed from Vilmorin. Doing well and does not suffer from heat or frost in Lahore. This tree is commonly grown in Gibraltar.

Distribution.—S. America.

XC. POLYGONACEAE.

412. CALLIGONUM L.

734. *Calligonum polygonoides* Linn. Sp. Pl. (1753) 530.*Locality*.—Multan Khanewal (* Parker 18076!, 18075!, Elliot!); Muzzafargarh (** Wingate!; Monro 305!).*Flowers*.—January-April.* According to Brandis [*Indian Trees*, p. 521] this plant is found as far north as Lahore. This statement is, I believe, untrue. I have not seen it anywhere in either Lahore or Montgomery Districts. On the railway from Lahore to Karachi it starts suddenly at Mian Channa just within the border of Multan District. It is always found on sand dunes (Parker.).

** The flowers are eaten by the poorer classes of people.

Distribution.—Persia; Armenia; Syria. India—the Punjab, Rajputana, Sind.

413. POLYGONUM L.

735. *Polygonum plebejum* Br. Prodr. 420.*Locality*.—Peshawar College (Quizilbash 3!); Lahore (Stewart 2806!, 2605!, 2663!, 2545!).*Flowers*.—April.*Distribution*.—Afghanistan; Tropical Asia; Java; Philippines; Australia; Madagascar; Egypt; Tropical and S. Africa. India—Rajputana, Sind.736. *Polygonum plebejum* Br. var. *indica*.*Locality*.—Lahore (Stewart 2807!).*Flowers*.—April.

A common Australian and African form.

737. *Polygonum plebejum* Br. var. *brevifolia*.*Locality*.—Multan (* Monro 261!).*Flowers*.—March.

* Eaten greedily by cattle.

Distribution.—India; Africa.738. *Polygonum plebejum* Br. var. *micranthema*.*Locality*.—Lahore (2617!, Stewart 2509!).*Flowers*.—April.*Distribution*.—India.739. *Polygonum barbatum* Linn.*Locality*.—Rawalpindi (Ait. 222!).*Flowers*.—September.*Distribution*.—Tropical Asia and Africa. Throughout the hotter parts of India.740. *Polygonum serrulatum* Lagasc. Boiss. Fl. Orient. IV, 1028.*Locality*.—Lahore (Stewart 2804!).*Flowers*.—April.

Distribution.—W. Asia; S. Europe; Africa; America; Australia. Plains and low hills of India.

741. **Polygonum Hydropiper** Linn.

Locality.—Hoshiarpur (Ait. 47!); Lahore (3006!).

Distribution.—Europe and N. Africa; Temperate and subtropical Asia; Java; N. America; Australia. Plains and hills of India, in wet places.

414. RUMEX L.

742. **Rumex orientalis** Benth. Boiss. Fl. Orient. IV, 1009.

Locality.—Peshawar College (Quizilbash 5!).

Distribution.—Asia Minor; Syria and Greece. India—W. Himalaya.

743. **Rumex dentatus** Linn.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 21718!, 21719!; Stewart 2805!); Rawalpindi (Ait. 516!); Hoshiarpur (Ait. 607!).

Flowers.—March-April.

Distribution.—India.

XCI. PIPERACEAE.

415. PIPER L.

744. **Piper longum** Linn. Sp. Pl. 29.

Locality.—Hoshiarpur (*Ait. 493!).

* Cultivated in gardens for market.

Distribution.—Ceylon; Malacca; Malay Islands. Hotter provinces of India from Assam, Khasia Mts. and Bengal westwards to Bombay and to Travancore, wild or cultivated.

XCII. LAURACEAE.

416. MACHILUS NEES.

745. **Machilus odoratissima** Nees in Wall. Pl. As. Rar. II, 70, and Syst. Laurin, 172.

Locality.—Husanabad, Abbottabad (Inayat!); Rawalpindi—Punjar (Parker 8670!).

Flowers.—May-June.

Distribution.—Java; Sumatra; Cochin China. India—Subtropical and temperate Himalaya.

417. LITSAEA LAMK.

746. **Litsaea sebifera** Pers. Syn. II, 4.

Locality.—Rawalpindi 3,000 ft. (Jerram 7329!); Gurdaspur (Fane 4861!).

Flowers.—June.

Distribution.—Ceylon; Malay Islands; China; Australia. Throughout the hotter parts of India, from the Punjab to Assam, the Gangetic Plain and Bengal, and southwards throughout the Deccan Peninsula.

747. **Litsaea polyantha** Juss. in Ann. Mass. VI, 211.

Locality.—Gurdaspur (Fane 4860!).

Flowers.—July.

Distribution.—Java; China. India—Punjab and the Salt Range along the foot of the Himalaya, eastwards to Assam and southwards to the Satpura Range.

XCIII. THYMELAEACEAE.

418. DAPHNE L.

748. **Daphne cannabina** Wall in Asiat. Research XIII, 315. t. 7, 8.

Locality.—Rawalpindi 5,000 ft. (Jerram 7471!).

Flowers.—March.

Distribution.—India—temperate Himalaya.

XCIV. LORANTHACEAE.

419. LORANTHUS L.

749. **Loranthus cordifolius** Wall. in Roxb. Fl. Ind. ed Carey and Wall. II, 223 and Cat. 517.

Locality.—On road from Shahpur to Sihunta 3,000 ft. Chamba state (Parker 21614!).

Flowers.—January.

On *Vitex Negundo*.

Distribution.—India subtropical Himalaya, Central India.

750. **Loranthus longiflorus** Desrouss. in Lamk. Encyc. III, 498.

Locality.—Rawalpindi, Saligraon (Parker 9998!); Hoshiarpur (Ait. 502!).

Flowers.—February.

Distribution.—India—tropical and temperate Himalaya, Gangetic plains from Oudh to Assam and southwards on plains and hills throughout both peninsulas to Travancore. Ceylon; in the warm parts.

420. VISCUM L.

751. **Viscum japonicum** Thunb. in Trans. Linn. Soc. II, 329.

Locality.—Rawalpindi, Murree 7,000 ft. (Ait!).

On *Quercus*.

Distribution.—Mauritius; China; Japan; Australia. India—temperate Himalaya, alt. 5-7,000 ft., Nilgiri Hills, ascending to 7,000 ft., Central Provinces in the most elevated parts.

XCV. EUPHORBIACEAE.

421. EUPHORBIA L.

752. **Euphorbia hypericifolia** Linn. Hort. Cliff. 148.

Locality.—Rawalpindi (Ait. 529!); Hissar (Duthie 4375!).

Flowers.—July-August.

Distribution.—Ceylon; Tropics of both the hemispheres, except Australia and the Pacific Islands. Common throughout the hotter parts of India, from the Punjab to the S. Deccan.

753. **Euphorbia hirta** Linn. Sp. Pl. (1753) 454.

Locality.—Changa Manga (42605).

Flowers.—September.

Distribution.—Throughout the hotter parts of India from the Punjab to Ceylon. All tropical and subtropical countries.

754. **Euphorbia thymifolia** Burm. Fl. Ind. 2 and Thes. Zeylan, t. 105, f. 2

Locality.—Changa Manga (Parker 42606!); Hissar bir (Harsukh 20688!; Duthie 437a).

Flowers.—August-October.

Distribution.—Throughout India and Ceylon in the plains and lower hills. All hot countries except Australia.

755. **Euphorbia granulata** Forsk. Fl. Aeg. Arab. 94.
Locality.—Lahore—(2661 !; Stewart 2533 !).
Flowers.—March-April.
Distribution.—Afghanistan; Arabia; Egypt; Canaries. India—Punjab plains, Rohilkhand, Rajputana, Sind.
756. **Euphorbia Clarkeana** Hook. f.
Locality.—Lahore (Cleghorn 2647 !); Rawalpindi (Ait. 525 !); Hissar (Duthie 4374 !).
Flowers.—May-August.
Distribution.—India—N.-W. India, Rajputana, Sind.
757. **Euphorbia Tirucalli** Linn. Hort. Cliff. 147.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 13616 !).
Flowers.—June.
Distribution.—India—naturalised in Bengal and the Deccan Peninsula, cultivated in N.-W. India, Burma and E. Peninsula. Ceylon naturalised; a native of Africa.
758. **Euphorbia helioscopia** Linn. Sp. Pl. 459.
Locality.—Rawalpindi (Ait. 528 !); Lahore (Stewart 2839 !).
Flowers.—April.
Distribution.—Afghanistan and westwards to the Atlantic; Japan; introduced elsewhere. India—the Punjab and W. Himalaya in fields, introduced into the Nilgiris.
759. **Euphorbia dracunculoides** Lamk. Encycl. II, 428.
Locality.—Jhelum (Ait. !); Lahore (Stewart 2532 !).
Flowers.—March.
Distribution.—Arabia and Tropical Africa. India—from the Punjab to Bihar in the plains and low hills, and southward to Canara and Coromandel.
760. **Euphorbia falcata** L. Sp. Pl. 456.
Locality.—Rawalpindi (Ait. 630 !).
Flowers.—March.
Distribution.—Afghanistan and westwards to Arabia, Middle and S. Europe, and N. Africa. India—the Punjab.
761. **Euphorbia prolifera** Ham. in Don Prodr. 62.
Locality.—Rawalpindi (Ait. 531 !, 532 !).
Flowers.—April-May.
Distribution.—Yunnan. India—C. and W. Himalaya, plains and rocky hills from Oudh to the Punjab.
762. **Euphorbia pulcherrima** Willd. ex Klotzsch, in Otta & Dietr. Allg. Gartenz II (1834) 27.
Locality.—Hoshiarpur (Ait. 481 !).
Distribution.—Mexico.

422. **SARCOCOCCA LINDL.**

763. **Sarcococca pruniformis** Lindl. Bot. Reg. t. 1012.
Locality.—Rawalpindi above 5,000 ft. (Jerram 7472 !).
Flowers.—March.
Distribution.—Ceylon; Afghanistan; Sumatra. India—temperate Himalaya, Deccan Peninsula, on the W. Ghats from Canara southwards.

423. BUXUS L.

764. **Buxus papillosa** C. K. Schneider, Ill. Handb. Laubholz II, 139 (1907)
Locality.—Peshawar College (Quizilbash 58544 !); Rawalpindi—Kala chitta (Parker 10188 !).
Flowers.—December-March.
Distribution.—India.

424. ANDRACHNE L.

765. **Andrachne cordifolia** Muell. Arg. in DC. Prodr. XV, 234.
Locality.—Rawalpindi over 6,000 ft. (Jerram 8277 !).
Flowers.—July.
Distribution.—Afghanistan. India—C. and W. temperate Himalaya, alt. 5-8,000 ft.

425. PHYLLANTHUS L.

766. **Phyllanthus Niruri** Linn. Sp. Pl. 98.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 38823 !).
Flowers.—August. A weed.
Distribution.—Ceylon; Malacca; Tropics generally except Australia. Throughout the hotter parts of India, from the Punjab to Assam and southwards to Travancore, ascending the hills to 3,000 ft.

426. GLOCHIDION FORST.

767. **Glochidion assamicum** Hook. f.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 14881 !).
Flowers.—March.
Distribution.—India—W. Himalaya, foot and low valleys of the Himalaya, Bengal, Assam.
768. **Glochidion velutinum** Wight Ic. t. 19071-2.
Locality.—Rawalpindi, Panjuri (Parker 10190 !).
Flowers.—February.
Distribution.—India—hot valleys of the Himalaya, Deccan Peninsula from the Konkan to the Nilgiri Hills.

427. BREYNIA FORST.

769. **Breynia rhamnoides** Muell. Arg. in DC. Prodr. XV, ii, 440 (excl. vars. a., r.)
Locality.—Lahore—Ag. Hort. Gdns. (Parker 13619 !).
Flowers.—June.
Distribution.—Ceylon; Malacca; China; Malay Islands, Philippines. Throughout tropical India.
770. **Breynia cernua** Muell. Arg. in DC. Prodr. XV, ii, 439.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 13763 !, 38824 !).
Flowers.—September.
 Shrub 4 ft. high.
Distribution.—Australia; Timor Island.

428. JATROPHA L.

771. **Jatropha gossypifolia** Linn. Sp. Pl. 1006.
Locality.—Lahore—Ag. Hort. Gdns. (Parker 13130 !).
Distribution.—Native of Brazil.

772. **Jatropha panduraefolia** Andr. Bot. Rep. t. 267; Woodr. Gard. in Ind. ed. 5, 442.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 15031!).

Flowers.—May.

Distribution.—Native of Cuba.

429. ALEURITES FORST.

773. **Aleurites moluccana** Willd. Sp. Pl. IV, 590.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 13137!, 12968!).

Flowers.—April.

Distribution.—India. Native of Pacific Islands.

430. CROTON L.

774. **Croton caudatus** Geisel Croton. Mongr. 73.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38846!).

Flowers.—August.

Distribution.—Ceylon; Malacca; Java; Philippines. India—E. Himalaya, Assam, Bengal and Silhet to the Deccan.

431. CHROZOPHORA NECK.

775. **Chrozophora hierosolymitana** Spreng. Syst. III, 850 = *verbascifolia*.

Locality.—Multan (Monro 206!); Rawalpindi (Ait. 533!).

Flowers.—May.

Distribution.—Mediterranean region; Orient.

432. ACALYPHA L.

776. **Acalypha ciliata** Forsk. Fl. Aeg. Arab. 162.

Locality.—Rawalpindi (Ait. 168!, 228!).

Flowers.—September.

Distribution.—Arabia; Tropical Africa. India—W. Himalaya, alt. 3-6,000 ft., the Deccan Peninsula from the Konkan southwards.

433. SAPIUM P. Br.

777. **Sapium sebiferum** Roxb. Fl. Ind. III, 693.

Locality.—Peshawar College (Quizilbash 62!); Hoshiarpur (Ait. 566!); Rawalpindi (Ait. 164!).

Distribution.—Cultivated in various parts of India and elsewhere in warm countries. A native of China.

XCVI. URTICACEAE.

434. TREMA LOUR.

778. **Trema politoria** Planch. in Ann. Sc. Nat. Ser. iii, X (1848) 326.

Locality.—Hoshiarpur (Ait. 506!).

Distribution.—India.

435. CANNABIS TOURNEF.

779. **Cannabis sativa** Linn. Sp. Pl. 1027.

Locality.—Rawalpindi (Ait. 230!).

Flowers.—September.

Distribution.—Central Asia, wild; cultivated in temperate and tropical regions. Throughout India, wild in the N.-W. Himalaya and cultivated elsewhere.

436. MACLURA NUTT.

780. **Maclura aurantiaca** Nutt. Gen. Am. II, 234.*Locality*.—Changa Manga (Parker 21042!).*Flowers*.—April.*Distribution*.—N. America.

437. MORUS L.

781. **Morus alba** Linn. Sp. Pl. (1753) 986.*Locality*.—Lahore—Changa Manga (Parker 39584!); Rawalpindi (* Ait. 535!, 534!).*Flowers*.—March-May. *Fruits*.—Deep purple.

* A cultivated tree in the Punjab proper. On the Hurrow road banks and on Indus banks on rocks it seems indigenous (Ait.).

Distribution.—Afghanistan; N. and W. Asia, wild or cultivated (for its fruit). India—cultivated in the Punjab, N.-W. Himalaya.782. **Morus indica** Linn. Sp. Pl. 986.*Locality*.—Lahore—Race course road (Parker 11413!, 11451!, 11414!).*Flowers*.—February-April.*Distribution*.—China; Japan. India—temperate and subtropical Himalaya, Bengal, Assam, Burma, wild and cultivated.783. **Morus laevigata** Wall. Cat. 4649.*Locality*.—Rawalpindi—Wate's Garden (Parker 10238!).*Flowers*.—March.*Distribution*.—India—tropical and subtropical Himalaya, Indus to Assam and Bihar, wild and cultivated.

438. FICUS L.

784. **Ficus bengalensis** Linn. Hort. Cliff. 471, n. 4.*Locality*.—Kalesar, alt. 1,150 ft. (Lace. Herb. 35!).*Distribution*.—Plants in all the plains of India, wild only in the subtropical Himalayan forests and on the lower slopes of the Deccan hills.785. **Ficus Rumphii** Blume Bijl. 437.*Locality*.—Kangra—Shahpur (Parker 10529!).*Flowers*.—May.*Distribution*.—Malay Islands. India—on the dry lower slopes of the mountains of the Punjab; N.-W. and C. India, Assam to Burma.786. **Ficus religiosa** Linn. Hort. Cliff. 471.*Locality*.—Hoshiarpur (Ait. 126!).*Distribution*.—Wild in the Sub-Himalayan forests, in Bengal and in Central India; universally planted in India and Ceylon, less frequently in Burma and rarely in the Malay region.787. **Ficus scandens** Roxb. Fl. Ind. III, 536.*Locality*.—Kangra—Shahpur (Parker 10528!).*Flowers*.—March.*Distribution*.—Tropical Himalaya from Kumaon eastwards; Assam, Khasia Hills, Chittagong, Burma, and the Andaman Islands; Bihar on Parsunath.788. **Ficus foveolata** Wall. Cat. 4493.*Locality*.—Rawalpindi, Sangseri, 5,000 ft. (Jerram 7602!).*Flowers*.—April.*Distribution*.—China. India—Outer Himalaya from Chamba to Bhotan Khasia Hills, Chittagong and Burma.

789. **Ficus palmata** Forsk. Fl. Aegypt. 179.

Locality.—Rawalpindi (Ait. 211); Phagwar, 5,000-6,000 ft. (Jerram 8095!); Peshawar (Stewart!); Gurdaspur, Dhunera (Bisram 306!).

Flowers.—June-September.

Distribution.—N.-W. India from the Indus eastwards to Oudh, ascending to 3,000 ft. in the Himalaya. Westwards to Egypt and Abyssinia.

790. **Ficus Roxburghii** Wall. Cat. 4508.

Locality.—Rawalpindi (Ait. 165).

Distribution.—India—Outer Himalaya, from the Indus to Bhotan, Khasia Hills, Chittagong, Burma, ascending to 5,000 ft.

791. **Ficus glomerata** Roxb. Cor. Pl. II, t. 123 and Fl. Ind. iii, 558.

Flowers.—September.

Distribution.—Outer Himalaya and plains and low hills of India, from Rajputana and the Salt Range to the Khasia Hills, Burma, the Deccan Peninsula, and Ceylon.

792. **Ficus macrophylla** Desf. Tabl. ed. I, 209.

Locality.—Changa Manga (Parker 19341!).

Distribution.—Australia.

439. **ARTOCARPUS FORST.**

793. **Artocarpus integrifolia** Linn. Fl. Suppl. 412.

Locality.—Hoshiarpur (Ait. 476!); Bhullan (Parker 10237!).

Flowers.—January.

Distribution.—Deccan Peninsula, native of the forests of the Western Ghats; cultivated throughout the hotter parts of India and E. Asia.

794. **Artocarpus Lakoocha** Roxb. Fl. Ind. iii, 524.

Locality.—Hoshiarpur (* Ait. 484!).

* Cultivated in Hoshiarpur gardens and does not produce fruit.

Distribution.—Malacca. India—tropical Himalaya, ascending to 4,000 ft. from Kumaon eastwards to Burma and southwards to Travancore.

440. **BOEHMERIA JACQ.**

795. **Boehmeria platyphylla** Don. Prodr. 60.

Var.—*scabrella* Wedel.

Locality.—Hoshiarpur (Ait. 534!).

Distribution.—India. Ceylon.

441. **POUZOLZIA GAUZ.**

796. **Pouzolzia pentandra** Benn. Fl. Jav. 64, t., 14.

Locality.—Rawalpindi (Ait. 190!); Lahore (2987! Brandis' Herb.).

Flowers.—September.

Distribution.—China; Japan. India—tropical Himalaya from Kangra, eastwards to Assam, the Khasia Hills and Bengal, and southwards to Orissa and Canara.

442. **PARIETARIA TOURNEF.**

797. **Parietaria debilis** Forst. Prodr. 387.

Locality.—Rawalpindi (Ait. 1107!).

Flowers.—May.

Distribution.—Many temperate and tropical regions, extending to Australia and Chili. India—temperate Himalaya, from the Punjab to Sikkim, alt. 8-1,200 ft., the Konkan and Nilgiri Hills.

443. FORSKOHLEA L.

798. *Forskohlea tenacissima* Linn. Mant. 72.*Locality*.—Rawalpindi, Attock (Ait. 1108!); Near Peshawar (Collett!).*Flowers*.—April.*Distribution*.—Egypt; Arabia; Afghanistan. India—W. Punjab, Sind. Baluchistan.

XCVII. PLATANACEAE.

444. PLATANUS L.

799. *Platanus orientalis* Linn. Sp. Pl. 999.*Locality*.—Rawalpindi, Saidpur (Ait. 1136!).*Distribution*.—Wild from N. Persia westwards to South Italy. India—N.-W. Himalaya; from the Sutlej westwards, cultivated only.

XCVIII. JUGLANDACEAE.

445. ENGELHARDTIA LESCHEN.

800. *Engelhardtia Colebrookiana* Lindl. in Wail. Pl. As. Rar. III, 4, t. 208 and Cat. 494.*Locality*.—Hoshiarpur (Ait. 529!).*Distribution*.—China. India—W. Himalaya, from the Chenab to Nepal, Assam and the Khasia Hills, Burma.

XCIX. CASUARINACEAE.

446. CASUARINA FORST.

801. *Casuarina equisetifolia* Forst. Char. Gen. 103, f. 53.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 14387!, 14388!); Ravi Park (Parker 38703!).*Flowers*.—April-June.*Distribution*.—Malay Islands; Australia; Pacific. India—On the east of the Bay of Bengal, from Chittagong southwards, cultivated elsewhere in India.

C. SALICACEAE.

447. SALIX L.

802. *Salix tetrasperma* Roxb. Cor. Pl. i, 66, t. 97; Fl. Ind. III, 573.*Locality*.—Gurdaspur (Bisram 848!).*Flowers*.—May.*Distribution*.—Sumatra; Java. Throughout tropical and subtropical India, from the Punjab eastwards to Assam and southwards to Travancore.803. *Salix acmophylla* Boiss. Diagn. VII, 98; Fl. Orient. IV, 1183.*Locality*.—Rawalpindi—Hurroo (Ait. 1113!).*Flowers*.—February.*Distribution*.—Afghanistan; Baluchistan and westwards to Syria. N.-W. India.

448. POPULUS L.

804. *Populus nigra* Linn. Sp. Pl. 1034.*Locality*.—Lombardy (Ait.!).*Cultivated*.*Distribution*.—Europe.

805. **Populus euphratica** Oliv. Voy. iii, 449, t. 45, 46.

Locality.—Lahore—Islands in the Ravi (Parker 14381!, 18105!, 18106!, 14382!); (Ait. 110!).

Flowers.—February. *Fruits.*—September.

Distribution.—W. and C. Asia, and westwards to Syria and Egypt. India—along the Indus Valley, in Sind, the Punjab and planted in the N.-W. Provinces.

CI. GNETACEAE.

449. **EPHEDRA** L.

806. **Ephedra foliata** Boiss. Fl. Orient V (1881) 716.

Locality.—Rawalpindi (Ait. 536!); Changa Manga (U. Kangilal!).

Flowers.—May-July.

Distribution.—Afghanistan to Syria. India—Punjab, Rajputana, Sind.

CII. CONIFERAE.

450. **CALLITRIS** VENT.

807. **Callitris quadrivalvis** Vent. Decad. 10.

Locality.—Lahore—Anarkali gdns. (Parker 7515!, 7516!, 6046!).

Flowers.—February-March.

Distribution.—N. Africa.

451. **THUYA** L.

808. **Thuya orientalis** Linn. Sp. Pl. 1002.

Locality.—Hoshiarpur (Ait. 486!).

Distribution.—China; Japan.

452. **CUPRESSUS** L.

809. **Cupressus lusitanica** Mill. Gard. Dict. ed. VIII, n. 3.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14386!, 7518!).

Flowers.—February.

Distribution.—India. Orient.

453. **PINUS** L.

810. **Pinus longifolia** Roxb. Fl. Ind. iii. 651.

Locality.—Hoshiarpur (Ait. 292!).

Distribution.—Afghanistan. India—outer Himalayan Ranges, from the Indus to Bhotan.

CIII. CYCADACEAE.

454. **ZAMIA** L.

811. **Zamia angustifolia** Jacq. Coll. III, 263.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 38859!).

A stemless tufted Cycad.

Distribution.—Bahama Islands.

CIV. HYDROCHARITACEAE.

455. HYDRILLA RICHARD.

812. *Hydrilla verticillata* Casp. in Monatsber. Akad. Berl. 1857.*Locality*.—Rawalpindi, Hurroo (Ait. 543!).*Distribution*.—Central Europe; Mauritius; Madagascar; Tropical Asia and Australia. Still and slowly running waters throughout India and Ceylon.

CV. ORCHIDACEAE.

456. EULOPHIA Br.

813. *Eulophia campestris* Wail. Cat. 7617.*Locality*.—On islands in the river at Urezerabad (Clarke 545!); Lahore (Stewart 2625!).*Flowers*.—March-May.*Distribution*.—Afghanistan. Plains of India, from the Punjab to Oudh, Bengal, Chittagong and the Deccan.

457. ZEUXINE LINDL.

814. *Zeuxine sulcata* Lind. Gen. & Sp. Orchid. 485.*Locality*.—Hoshiarpur (Ait. 73!); Lahore (Stewart 2825!, 2522!).*Flowers*.—March-April.*Distribution*.—Afghanistan; Java; China; Philippines. Throughout India in the plains and low hills from the Punjab and Sind to Assam, Chittagong, and southwards to Ceylon.

CVI. HAEMODORACEAE.

458. OPHIOPOGON KER.

815. *Ophiopogon japonicus* Ker-Gawl. in Bot. Mag. t. 1063.*Locality*.—Rawalpindi 5,000 ft. (Ait. 126!).*Flowers*.—August.*Distribution*.—Japan.

CVII. DIOSCOREACEAE.

459. DIOSCOREA L.

816. *Dioscorea belophylla* Voigt. Hort. Suburb. Calcutt. 653 (1845), nomen; Haines, For. Fl. Chota-Nagpur 530 decr. = *D. sagittata* Royle.*Locality*.—Hoshiarpur (Ait. 586!).*Distribution*.—India.

CVIII. LILIACEAE.

460. SMILAX L.

817. *Smilax aspera* Linn. Sp. Pl. 1028.*Locality*.—Rawalpindi—Hokraker, 5,000 ft. (Jerram 8066!, 7790!, 7789!).*Fruits*.—June.*Distribution*.—Ceylon; Syria; S. Europe; N. Africa. Throughout India.818. *Smilax prolifera* Roxb. Fl. Ind. iii, 795.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 14876!).*Flowers*.—January.*Distribution*. Throughout India. Ceylon.

461. ASPARAGUS L.

819. *Asparagus capitatus* Baker in Journ. Linn. Soc. XIV, 607.

Locality.—Rawalpindi—Barrakow (Ait. 556!, 137!).

Flowers.—April. *Fruits*.—August.

Distribution.—India—foot of the W. Himalaya.

820. *Asparagus racemosus* Willd. Sp. Pl. ii, 152.

Locality.—Hissar bir (Duthie 4450!).

Distribution.—Tropical Africa; Java; and Australia. Throughout tropical and subtropical India and Ceylon, ascending the Himalaya to 4,000 ft.

821. *Asparagus adscendens* Roxb. Fl. Ind. iii, 153.

Locality.—Hoshiarpur (Ait. 629!); Rawalpindi (Ait. 235!, 557!).

Flowers.—September.

Distribution.—Afghanistan. India—Rohilkhand, the W. Himalaya and the Punjab, from Murree eastwards to Kumaon.

822. *Asparagus Sprengeri* Regel in Act. Hort. Petrop. XI (1890) 490, f. 8,

Locality.—Lahore—Ag. Hort. Gdns. (Parker 14361!).

Flowers.—April.

Distribution.—S. Africa, Orient.

462. YUCCA DILL.

823. *Yucca gloriosa* L. Sp. Pl. 319.

Locality.—Lahore (Parker 15044!).

Distribution.—N. America.

463. ASPHODELUS L.

824. *Asphodelus tenuifolius* Cavan. in Anal. Cienc. Nat. iii, 46, t. 27; and Icon, t. 587, f. 2.

Locality.—Peshawar College (Quizilbash 10!).

Distribution.—Plains of India, in fields, from Bengal westwards to Gujarat and the Punjab. Westwards to the Canary Islands.

464. ALLIUM L.

825. *Allium rubellum* M. Bieb. Fl. Jaur. Cauc. i, 264.

Locality.—Rawalpindi (Ait. 551!, 550!, 549!).

Flowers.—April.

Distribution.—India—Punjab and W. Himalaya, from Kashmir to Kumaon. Westwards to the Ural and Caucasus, and in Siberia.

465. DIPCADI MEDIC.

826. *Dipcadi serotinum* Medic. in Act. Palatin. VI, 431.

Locality.—Rawalpindi—Mt. Tilla (Ait. 554!).

Flowers.—March.

Distribution.—Europe. India—Punjab, Kumaon.

466. SCILLA L.

827. *Scilla Hohenackeri* Fisch. & Mey. in Bull. Soc. Nat. Masc. 1838, I, 256.

Locality.—Peshawar (Rodger 43399!); Rawalpindi—Hurroo (Ait. 552!).

Flowers.—March.

Distribution.—Afghanistan; Persia. India—Punjab.

467. MERENDERA RAMOND.

828. *Merendera persica* Boiss. & Kotsch. Diagn. XIII, 37; Fl. Orient V, 169.

Locality.—Rawalpindi—Futtehganj (Ait. 1124!).

Flowers.—February-March.

Distribution.—Afghanistan; N. Persia. India—the Punjab.

468. GLORIOSA L.

829. *Gloriosa superba* Linn. Sp. Pl. 305.

Locality.—Rawalpindi—Barrakow (Ait. 547!).

Flowers.—September.

Distribution.—Ceylon; Tropical Africa; Malaya; Cochin-China. Throughout tropical India.

CIX. COMMELINACEAE.

469. COMMELINA L.

830. *Commelina bengalensis* Linn. Sp. Pl. 41.

Locality.—Rawalpindi (Ait. 169!); Multan (* Monro 63!).

Flowers.—September.

* Ointment made from leaves mixed with cotton leaves and butter used for boils.

Distribution.—Tropical Asia and Africa. Throughout India, ascending to 6,000 ft. in the Himalaya.

831. *Commelina glabra* Clarke. Monogr. 163.

Locality.—Rawalpindi (Ait. 170!).

Flowers.—September.

Distribution.—India—the Southern Deccan Peninsula.

CX. PALMAE.

470. SABAL ADANS.

832. *Sabal Adansoni* Guerns. in Bull. Soc. Philom. III (1803) 206, t. 25.

Locality.—Lahore—Ag. Hort. Gdns. (* Parker 13658!).

Flowers.—May.

* Stemless.

Distribution.—N. America.

471. CHAMAEROPS L.

833. *Chamaerops humilis* Linn. Sp. Pl. 1187.

Locality.—Lahore—Ag. Hort. Gdns. (Parker 11450!).

Flowers.—February.

Stem 1-5 ft. high.

Distribution.—W. Mediterranean region.

CXI. TYPHACEAE.

472. TYPHA L.

834. *Typha elephantina* Roxb. Fl. Ind. iii, 556.

Locality.—Rawalpindi (Ait. 695!).

Flowers.—September.

Distribution.—Algiers. Marshes from N.-W. India to Assam and southwards.

835. **Typha angustata** Chaub. & Bory Exped. Scient. Morée Bot. 338.

Locality.—Multan (4!); Makhdumpur (Monro 356!); Rawalpindi (Ait. 694!); Lahore—Kot Lakhpat (* Parker 14359!, 14360!).

Flowers.—September-October.

* Introduced in Kot Lakhpat Plantation by canal water, found in wet Borrow Pits near the canal. Used for making chucks, winnowing trays, etc.

Distribution.—N. Asia and westwards N. Africa and S. Europe. Northern India, from Kashmir to Munnipore and southwards to Sind and Coromandel.

473. SPARGANIUM L.

836. **Sparganium ramosum** Huds. Fl. Angl. 40.

Locality.—Rawalpindi (Ait. 540!).

Flowers.—March.

Distribution.—N. Temp. regions. India.

CXII. ARACEAE.

474. COLOCASIA L.

837. **Colocasia Antiquorum** Schott Melet. I, 18; Syn 40; Prodr. 38.

Locality.—Rawalpindi (Ait. 537!).

Flowers.—March.

Cultivated for vegetable purposes.

Distribution.—Throughout the hotter parts of India and Ceylon, in moist and dry places, wild or cultivated. Cultivated in all hot countries.

CXIII. LEMNACEAE.

475. LEMNA L.

838. **Lemna paucicostata** Hegelm. Lemnae. 139, t. 8.

Locality.—Rawalpindi (Ait. 572!, 538!).

Distribution.—Cosmopolitan tropical. In various parts of India and Ceylon.

476. WOLFFIA HORREL.

839. **Wolffia microscopica** Kurz in Journ. Linn. Soc. IX, 265.

Locality.—Lahore (Kashyap 18466!); Rawalpindi—Futtehgunj (Ait. 539!).

Distribution.—India.

CXIV. ALISMACEAE.

477. ALISMA L.

840. **Alisma Plantago** Linn.

Locality.—Hoshiarpur (Ait. 332!; Bisram 339!).

Flowers.—June.

Distribution.—N. and S. temperate regions. India—Marshes, etc. of the lower Himalaya, alt. 1-7,000 ft.

CXV. NAIADACEAE.

478. POTAMOGETON L.

841. **Potamogeton perfoliatus** Linn. Sp. Pl. 126.

Locality.—Rawalpindi (Ait. 232!).

Flowers.—September.

Distribution.—Malay and Sandwich Islands. Throughout the plains of India, ascending the Himalaya to 9,000 ft.

842. **Potamogeton crispus** Linn. Sp. Pl. 126.

Locality.—Rawalpinli (Ait. 569!).

Distribution.—N. and S. temperate and subtropical regions. Plains of India and temperate Himalaya.

843. **Potamogeton pectinatus** Linn. Sp. Pl. 127.

Locality.—Rawalpindi (Ait. 542!).

Distribution.—Plains of India. Most regions.

CXVI. CYPERACEAE.

479. CYPERUS L.

844. **Cyperus niveus** Retz. Obs. V, 12.

Locality.—Hoshiarpur (Ait. 134!); Rawalpindi (Ait. 94!).

Flowers.—July.

Distribution.—Kabul; China. India—from Kashmir to Upper Burma, alt. 0-6,000 ft., Rajputana and southwards to Calcutta and Hyderabad.

845. **Cyperus arenarius** Retz. Obs. IV, 9.

Locality.—Charkhi Dadri in sandy soil (Duthie 4491!); Rawalpindi (Ait. 239! named *C. laevigatus* Koen.).

Flowers.—August-September.

Distribution.—Persia; Arabia; Trop. Asia. India—Rajputana, Sind, Punjab Plains.

846. **Cyperus Atkinsoni** C. B. Clarke in Journ. Linn. Soc. XXI, 109.

Locality.—Charkhi Dadri in sandy soil (Duthie 4491a!).

Flowers.—August.

Distribution.—India.

847. **Cyperus I a** Linn. Sp. Pl. 67. (Excl. Rheede).

Locality.—Rawalpindi (Ait. 129!).

Flowers.—August.

Distribution.—Old World. India—Rajputana, general in rice fields.

848. **Cyperus eleusinoides** Kunth Enum. ii, 39.

Locality.—Rawalpindi (Ait. 245!, 244!).

Flowers.—September.

Distribution.—Asia; Africa; Australia. India—Punjab to Ceylon, Rajputana.

849. **Cyperus tegetum** Roxb. Fl. Ind. i, 208.

Locality.—Hissar (Duthie 4483!).

Flowers.—August.

Distribution.—Tropical Africa; Mauritius; Ceylon. Throughout India—Rajputana, Sind.

850. **Cyperus rotundus** Linn. Sp. Pl. 67 (not in Linn. Herb).

Locality.—Multan (Monro 340!, 179!, 20!, 18!); Rawalpindi (Ait. 109!); Lahore (Stewart 2615!).

Distribution.—All warm regions. India—Rajputana, Sind, a pestiferous weed.

851. **Cyperus stoloniferus** Retz. Obs. IV, 10.

Locality.—Lahore (Monro 19!); Multan (Monro 389!).

Flowers.—September.

Distribution.—Malay Peninsula; Mauritius; China; Malaya; Australia. Shores of India, especially in sea sand, from Sind to Ceylon and Coromandel.

852. *Cyperus serotinus* Rottb. Desc. Nov. Pl. 31; Prog. 18=*Monti*.

Locality.—Rawalpindi (Ait. 246!).

Flowers.—September.

Distribution.—Europe; Orient.

480. KYLLINGA ROTTB.

853. *Kyllinga brevifolia* Rottb. Descr. et. Ic. 13, t. 4, f. 3.

Locality.—Rawalpindi (Ait. 240!).

Flowers.—September.

Distribution.—Throughout India, from the Punjab to Assam, Ceylon and Malacca. All warm regions except the Mediterranean.

481. ELEOCHARIS R. Br.

854. *Eleocharis palustris* Br. Prodr. 224 (in note).

Locality.—Peshawar (Quizilbash 40!); Rawalpindi (Ait. 558!).

Flowers.—May.

Distribution.—Cosmopolitan. India—from the W. Himalaya to Sind and Bengal.

482. FIMBRISTYLIS VAHL.

855. *Fimbristylis dichotoma* Vahl. Enum. ii, 287.

Locality.—Muzaffargarh (Monro 270!, 272!).

Flowers.—April.

Distribution.—Warm regions of the Old World. Throughout India—Rajputana, Sind, in rice fields.

856. *Fimbristylis ferruginea* Vahl. Enum. 291.

Locality.—Rawalpindi (Ait. 242!).

Flowers.—September.

Distribution.—All warm regions. Throughout India, Rajputana, Sind, abundant near the sea.

483. SCIRPUS L.

857. *Scirpus quinquefarius* Ham. in Wal. Cat. 3465.

Locality.—Rawalpindi (Ait. 259!).

Flowers.—September.

Distribution.—Turkestan, Afghanistan; Africa. N. India, Rajputana, Sind,

858. *Scirpus mucronatus* Linn. Sp. Pl. 73.

Locality.—Rawalpindi (Ait. 559!).

Flowers.—May.

Distribution.—Europe; Madagascar; warmer Asia; Australia. Throughout India.

859. *Scirpus littoralis* Schrad. Fl. Germ. i, 142, t. 5, f. 7.

Locality.—Rawalpindi (Ait. 560!).

Flowers.—May.

Distribution.—Central Asia; Mediterranean region; Persia; Africa; Ceylon. India—Rajputana, Sind.

484. CAREX L.

860. *Carex setigera* Don in Trans. Linn. Soc. XIV, 330 & Prodr. 43.

Locality.—Rawalpindi—Murree 6,500 ft. (58!, 55!, 18!).

Flowers.—May.

Distribution.—India.

861. **Carex Wallichiana** Prescott in Wall. Cat. 3380.

Locality.—Rawalpindi—Hurroo (Ait. 1127!).

Flowers.—March.

Distribution.—Afghanistan. N. India.

CXVII. GRAMINEAE.

485. PASPALUM L.

862. **Paspalum sanguinale** Lamk. Illustr. I, 176.

Locality.—Rawalpindi (Ait. 120!).

Flowers.—August.

Distribution.—All warm countries. Throughout India, in dry and moist situations ascending the Himalaya to 6,000 ft.

863. **Paspalum longiflorum** Retz. Obs. IV, 15 (non Trin.).

Locality.—Karnal (Drum!).

Flowers.—August-September.

Distribution.—Tropical and subtropical regions of the Old World. Throughout India.

486. ISACHNE Br.

864. **Isachne australis** Br. Prodr. 196.

Locality.—Rawalpindi (Ait. 250!).

Flowers.—September.

Distribution.—Australia; New Zealand. Hotter parts of India, from Assam and Burma to Central India and southwards to Ceylon.

487. PANICUM L.

865. **Panicum Crus-galli** Linn. Sp. Pl. 56.

Locality.—Karnal (Drum!); Multan!

Flowers.—August.

Distribution.—All warm countries. Throughout India, especially in wet and rich soils.

866. **Panicum colonum** Linn. Syst. Ed. X, 870.

Locality.—Multan (Monro 16; Forest Dept. 8!); Muzaffargarh (Monro 26!, 27!); Rawalpindi (Ait. 96!); Hissar bir (Duthie 5026!).

Flowers.—July-September.

Best fodder for cows, buffaloes, horses. The seed is eaten by people. Hindus make sweetmeat of it during fast days.

Distribution.—All warm countries. Throughout India and Ceylon.

867. **Panicum prostratum** Lamk. Illustr. i, 171; Encycl. IV, 745.

Locality.—Rawalpindi (Ait. 107!).

Flowers.—July.

A good fodder grass.

Distribution.—Tropics generally. Plains of India from the Punjab, Sind to Assam and Burma and southwards to Ceylon.

868. **Panicum ramosum** Linn. Mant. i, 29.

Locality.—Hissar (Duthie 5019!) Karnal (Drum!); Hansee 187!; Multan (Monro 369!; * Forest Dept. 2!).

Flowers.—August.

* Grows on sandy soil with enough moisture. Good fodder for cattle, worse fodder for camels and goats.

Distribution.—Afghanistan; Ceylon. Plains of India from Sind, Rajputana and the N.-W. Provinces to Bihar and southwards to Madras.

869. **Panicum hydaspicum** Edgew. in Journ. Linn. Soc. vi (1862) 207.

Locality.—Karnal jungle (Drum!); Rawalpindi (Ait. 123!).

Flowers.—August-September.

Distribution.—India—the Punjab and Upper Gangetic Plain.

870. **Panicum antidotale** Retz Obs. IV, 17.

Locality.—Hissar bir (Harsukh 20715!, Duthie 5025!); Multan (Monro 81!; Duthie 10802!); Rawalpindi (Ait. 113!); Hoshiarpur (Ait. 1114!).

Flowers.—July-February

Distribution.—Afghanistan; Africa; Tropical Australia. India—the Punjab, Rajputana, Sind, Upper Gangetic Plain and southwards to S. Deccan and Ceylon.

488. OPLISMENUS BEAUV.

871. **Oplismenus compositus** Beauv. Agrost. 54.

Locality.—Hoshiarpore (Ait. 480!).

Distribution.—Ceylon, most tropical regions (except Australia). Throughout India.

489. SETARIA BEAUV.

872. **Setaria glauca** Beauv. Agrost. 51.

Locality.—Karnal (Durm!); Rawalpindi (Ait. 108!).

Flowers.—May-July.

Distribution.—All warm, temperate and tropical regions. Throughout India, especially in cultivated ground.

490. PENNISETUM PERS.

873. **Pennisetum orientale** Rich. in Pers. Syn. i, 72.

Locality.—Rawalpindi—Murree (Wingate 35!); Barrakow 2,500 ft. (Wingate 4!).

Flowers.—April-May.

Distribution.—Asia Minor and N. Africa. India—W. Himalaya, the Punjab, Sind, the Konkan and Bihar.

874. **Pennisetum cenchroides** Rich. in Pers. Syn. i, 72.

Locality.—Multan (Monro 14!, 13!; * Forest Dept. 14!); Lahore (Stewart 2524!; Duthie!; Brandis' Herb. 2960!); Rawalpindi (Ait. 99!).

Flowers.—August-September.

* Best fodder to increase milk for cattle. Average kind of fodder for ponies. Grows on good sandy and moist soils.

Distribution.—Canary Islands; Tropical Africa; Sicily. India—plains and low hills throughout W. India, Rajputana, Sind. Baluchistan.

875. **Pennisetum Prieurii** Kunth Revis. Gram. ii, 411, t. 119; Enum. Pl. i, 162; Suppl. 119.

Locality.—Lahore (Hein!); Multan (Monro 14!).

Flowers.—August-September.

Distribution.—Tropical Africa. India—The Punjab, Rajputana.

876. **Pennisetum typhoideum** Rich. in Pers. Syn. I (1805) 72.

Locality.—Lahore (Stewart 2844!).

Distribution.—Africa and S. Europe. Throughout the hotter parts of India, widely cultivated.

491. CENCHRUS L.

877. *Cenchrus biflorus* Roxb. Fl. Ind. i, 233.*Locality*.—Lahore (2957; Stewart 2845!); Hissar bir (Harsukh 20708!; Duthie 5034!); Sialkot (Bairus' father!).*Flowers*.—April-October.*Distribution*.—Arabia; Africa. India—the Punjab, Rajputana, Sind, Upper Gangetic Plain, the Konkan. Baluchistan.878. *Cenchrus catharticus* Delile Cat. Hort. Monsp. 1838; in Linnaea XIII (1839) Litterb 103.*Locality*.—Hissar bir (Harsukh 20702!); Panipat (Drum!).*Flowers*.—October.*Distribution*.—Arabia; Tropical Africa. India—the Punjab, Rajputana, Upper Gangetic Plains.

492. ORYZA L.

879. *Oryza sativa* Linn. Sp. Pl. 333.*Locality*.—Rawalpindi (Ait. 255!).*Fruits*.—September.*Distribution*.—Ceylon; Tropical Australia. Indigenous in marshes of Rajputana, Sikkim, Bengal, the Khasia Hills, Central India, the Circars.

493. TRAGUS HALLER.

880. *Tragus racemosus* Scop. Introd. Hist. Nat. 73.*Locality*.—Rawalpindi (Ait. 110!); (Barrakow 1!).*Flowers*.—May-August.*Distribution*.—Warm regions generally. Dry plains of India, Burma, Ceylon.

494. IMPERATA CYRILL.

881. *Imperata arundinacea* Cyrill. Pl. Rar. Neap Fasc. ii, 26, t. 11.*Locality*.—Rawalpindi—Barrakow (Ait. 568!, 94!).*Flowers*.—April-September.*Distribution*.—Hotter parts of India, from the Punjab southwards, and eastwards to Malacca and Ceylon.

495. SACCHARUM L.

882. *Saccharum spontaneum* Linn. Mant. ii, 183.*Locality*.—Multan (Monro 34!); Rawalpindi (Ait. 131!).*Flowers*.—September-October.*Distribution*.—S. Europe and warm regions of the Old World; E. Australia. Throughout the warmer parts of India and Ceylon, ascending to 6,000 ft., in the Himalaya.883. *Saccharum arundinaceum* Retz. Obs. IV, 14.*Locality*.—Multan (Monro 33!); Karnal Gdns (3006! Drum's Herb).*Flowers*.—October.*Distribution*.—Ceylon; China. Throughout the plains and low hills of India.

496. ERIANTHUS MICHX.

884. *Erianthus Ravennae* Beauv. Agrost. 14.*Locality*.—Karnal (Jabraya 3008! Drum's Herb); Lahore (For. Economist 20162!, 20163!).*Flowers*.—October-December.

Distribution.—India—W. Himalaya, from Kashmir to Kumaon, the Punjab and Upper Gangetic Plain, from the Indus to Delhi. Westwards to the Mediterranean.

497. ISCHAEMUM L.

885. *Ischaemum angustifolium* Hook. Monogr. Androp. 241.

Locality.—Rawalpindi—Barrakow (Ait. 563!).

Flowers.—April.

Distribution.—Afghanistan; China; Philippines. India—Lower Himalaya, the Punjab, Rajputana, Mt. Aboo, the Satpura Hills, Bihar on Parusnath, Central India.

498. POGONATHERUM BEAUV.

886. *Pogonatherum saccharoideum* Beauv. Agrost. 56, t. f. 7.

Locality.—Hoshiarpur (Ait. 542!).

Distribution.—China; Malaya. Throughout the hilly parts of India, in dry places, from the Punjab eastwards to Bhotan, Manipur, Burma, ascending the Himalaya to 4,000 ft. and southwards to Central India and Ceylon.

499. ROTTBOELLIA L. f.

887. *Rottboellia compressa* Linn. f. Suppl. 114.

Locality.—Multan (Monro 209!).

Distribution.—Throughout the hotter parts of India, generally in wet places, Burma and Ceylon. Westwards to Spain and the Canaries and in most warm climates.

888. *Rottboellia compressa* Linn.—var. *fasciculata* Hack.

Locality.—Rawalpindi (Ait. 252!); Lahore (For. Dept. 6!).

Flowers.—September.

Distribution.—India—common especially on the borders of pools, often climbing among bushes.

889. *Rottboellia perforata* Roxb. Pl. Corom. ii, 43, t. 182; Fl. Ind. I, 356.

Locality.—Rawalpindi (Ait. 122!).

Flowers.—July.

Distribution.—Afghanistan; Java. Throughout India from the Indus to Burma and southwards to Ceylon.

500. ELIONURUS HUMB. & BONPL.

890. *Elionurus hirsutus* Munro ex Benth. in Journ. Linn. Soc. XIX (1881) 68.

Locality.—Hissar bir (Harsukh 20700!; Duthie 5053!); Rawalpindi (Wingate!); Multan (Monro!).

Flowers.—April-November.

Distribution.—India—N. Punjab, Rajputana, Sind. Westwards to N. Africa.

501. ANDROPOGON L.

891. *Andropogon foveolatus* Del. Fl. Egypt. 16 a, t. 8, f. 2.

Locality.—Hissar bir (Duthie 5064!); Rawalpindi (Ait. 98!).

Flowers.—August.

Distribution.—Drier parts of India, from the Punjab and Sind to Bengal, Chota Nagpur, Central Provinces, Circars, and Coromandel. Baluchistan; westwards to the Cape Verde Islands.

892. **Andropogon ischaemum** Linn. Sp. Pl. 1047.
Locality.—Hissar bir (Duthie 5060 !); Rawalpindi (Ait. 93 !).
Flowers.—August.
Distribution.—N.-W. India. Westwards to S. Europe, and tropics generally or sporadically.
893. **Andropogon hallpensis** Brot. Fl. Lusit, i. 89.
Locality.—Lahore (Monro 24 !); Rawalpindi (Ait. 116 !).
Flowers.—August.
Distribution.—Most warm countries. Throughout India, Burma and Ceylon in open places.
894. **Andropogon squarrosus** Linn. f. Suppl. 433. (*A. vetiverica zizanoides* Stapf.).
Locality.—Rawalpindi (Ait. 142 !); Peshawar (Stewart !); Hissar bir (Duthie 5061 !); Muzaffargarh (Monro 28 !).
Flowers.—August-September.
Distribution.—Java; Tropical Africa. Throughout the plains and lower hills of India, Burma and Ceylon.
895. **Andropogon monticolus** Schult. Mant. iii, 665.
Locality.—Rawalpindi (Wingate !).
Flowers.—April.
Distribution.—Burma; Afghanistan; S. Africa. India—W. Himalaya, from the Punjab to Bihar and southwards to Ceylon.
896. **Andropogon monticola** Schult. var. *Trinii*.
Locality.—Rawalpindi (3 !, 7 !, Ait. 92 !).
Flowers.—May-August.
897. **Andropogon annulatus** Forsk. Fl. Aeg. Arab. 173.
Locality.—Hissar bir (Duthie 5063 !, 5063 a !); Multan (Monro 22 !).
Flowers.—August-September.
Distribution.—Tropical Africa; China; Australia; Pacific Islands. Throughout the hills and plains of India.
898. **Andropogon contortus** Linn. Sp. Pl. 1045.
Locality.—Hissar bir (Duthie 5058 !); Rawalpindi (Ait. 117 !).
Flowers.—August.
Distribution.—Mediterranean region and tropics generally. Throughout India, Burma and Ceylon.
899. **Andropogon Iwarancusa** Jones in Asiat. Research IV (1795) 109. = *Cymbopogon Iwarancusa* Schult. fide Stapf.
Locality.—Hissar bir (Duthie 5062 !); Lahore (Stewart 2600 !; Brandis Herb. 2922 !); Multan (* For. Dept. 17 !; Duthie 10796 !).
Flowers.—April-December.
 *Grows in good sandy soil. Its flowers have got a nice smell and are used to make native scent. Average sort of fodder for cattle. Its roots are perhaps used as Khas for Tatties.
Distribution.—Plains of N.-W. India, Sind, W. Himalaya, N. Canara and the Deccan. Westwards to N. Africa.
900. **Andropogon Iwarancusa** Jones in Asiat. Research. IV (1795) 109. var. *laniger* Desf. Fl. Atlant. ii, 379 = *Cymbopogon Schoenanthus* Spreng. fide Stapf.
Locality.—Rawalpindi.—Barrakow (Ait. 5062 !); Multan (Monro 2 !); Hissar bir (Duthie 5062 !; Harsukh 20705 !).
Flowers.—April-September.

Distribution.—Plains of N.-W. India, Sind, W. Himalaya, N. Canara and the Deccan. Westwards to N. Africa

901. **Andropogon Schoenanthus** Linn. Sp. Pl. 1046.

Locality.—Hissar bir (Harsukh 20709 !); Patiala State (35 !).

Flowers.—October.

Distribution.—Hotter parts of India, wild or cultivated from the Punjab to Burma, and southwards to Travancore and Ceylon. Westwards to Tropical Africa.

502. **ISEILEMA HACK.**

902. **Iseilema Wightii** Anders. in Nov. Act. Soc. Sc. Upsal. Ser. 3, ii, 251.

Locality.—Hissar bir (Harsukh 20706 !, Duthie 5076 !); Sialkot (Bairu's father !); Lahore (For. Dept. 16 !).

Flowers.—August-October.

Distribution.—Throughout India.

503. **APLUDA L.**

903. **Apluda varia** Hack. Mongr. Androp. 196. var. *aristata*.

Locality.—Rawalpindi (Ait. 257 !); Lahore (For Dept. 16 !); Karnal (Drum !).

Flowers.—May-September.

Distribution.—E. Tropical Asia, Malaya; Australia; Pacific Islands. Throughout India.

504. **PHALARIS L.**

904. **Phalaris minor** Retz. Obs. iii, 8.

Locality.—Lahore (Stewart 2525 !).

Distribution.—Plains of W. India and the Himalaya. Westwards to Canaries; S. Africa; Australia.

505. **ARISTIDA L.**

905. **Aristida Adscensionis** Linn. Sp. Pl. 82.

Locality.—Hissar (Duthie 5078 !; Harsukh 20701 !); Rawalpindi (Ait. 95 !).

Flowers.—July-October.

Distribution.—Baluchistan and most warm countries. Throughout the plains and low hills of India, Burma and Ceylon.

906. **Aristida Hystrix** Linn. f. Suppl. 113.

Locality.—Rawalpindi (Ait. 118); Hissar bir (Duthie 5079 !).

Flowers.—August.

Distribution.—India—the Deccan Peninsula, from the Konkan and Central Provinces southwards.

907. **Aristida funiculata** Trin. & Rupr. in Mem. Acad. Petersb, Ser. VI, vii (1849) 159.

Locality.—Multan (Ram Nath 50481 !; 50480 !, 50479 !).

Distribution.—Arabia; Tropical Africa. India—Punjab plains, Rajputana, Sind, and the Konkan. Baluchistan.

908. **Aristida hystriacula** Edgew. in Journ. Linn. Soc. VI (1862) 208.

Locality.—Hissar bir (Harsukh 20712 !).

Flowers.—October.

Distribution.—India—Punjab, Sind. Baluchistan.

909. *Aristida hirtigluma* Steud. Nom. Ed. II, ii, 231, Syn. Gram. 144.

Locality.—Muzaffargarh (Monro 304!).

Flowers.—April.

Distribution.—Westwards to Egypt and Abyssinia. India—the Punjab. Sind.

506. STIPA L.

910. *Stipa orientalis* Trin. ex. Ledeb. Fl. Alt. i, 83.

Locality.—Peshawar (* Stewart!).

* Not common.

Distribution.—W. Tibet, westwards to Persia, Altai Mts.

507. ALOPECURUS L.

911. *Alopecurus nepalensis* Trin. ex Steud. Syn. Gram. 148.

Locality.—Rawalpindi (Wingate!).

Distribution.—India—the Punjab, Upper Gangetic Plains, Gharwal.

508. POLYPOGON DESF.

912. *Polypogon monspeliensis* Desf. Fl. Atlant. i, 66.

Locality.—Hoshiarpur (Ait. 626!); Lahore (Brandis Herb. 2921!).

Distribution.—Ceylon. Tropical and temperate regions. Throughout continental India.

509. SPOROBOLUS Br.

913. *Sporobolus diander* Beauv. Agrost. 25.

Locality.—Multan (Monro 6!).

Flowers.—September-November.

Distribution.—Asia and Tropical Australia. Throughout India, Burma and Ceylon.

914. *Sporobolus indicus* Br. Prodr. 170.

Locality.—Rawalpindi (Wingate!).

Flowers.—April.

Distribution.—All warm countries. Throughout India, Burma and Ceylon.

915. *Sporobolus minutiflorus* Link. Enum. Hort. Berol. i, 88.

Locality.—Hissar (Duthie 5083!).

Flowers.—August.

Distribution.—India—Deccan Peninsula, Canara.

916. *Sporobolus glaucifolius* Hochst. in Flora, XXV (1842) I, Bieb. 123.

Locality.—Multan (Monro 11!, 364!, 12!; Duthie 1080!; *For. Dept. 10!); Hissar bir—damp ground (Duthie 5085!).

Flowers.—September-December.

* On good sandy soil. Easily killed by deposit of silt. Best fodder for cows, buffaloes and horses. Makes good hay.

Distribution.—Tropical Africa. India—the Punjab, Sind.

917. *Sporobolus arabicus* Boiss. Diagn. Pl. Or. Ser. I, XIII, 47.

Locality.—Multan (Monro 12!, 3!, 48!; Duthie 10804!); Rawalpindi (Ait. 249!); Hissar (Duthie 5082!, 5084!).

Flowers.—August-December.

Distribution.—Arabia; Baluchistan; Waziristan. India—Punjab plains, Sind, Rajputana.

918. **Sporobolus coromandelianus** Kunth Revis. Gram. I, 681, Enum. Pl. 213

Locality.—Multan (Monro 5!).

Flowers.—September.

Distribution.—Afghanistan. N. and S. Africa. Plains of India from the Punjab eastwards to Burma and southwards to Ceylon.

510. AGROSTIS L.

919. **Agrostis alba** Linn. Sp. Pl. 63.

Locality.—Rawalpindi (Ait. 571!).

Flowers.—May.

Distribution.—N. temperate regions. India—W. Himalaya.

511. AVENA L.

920. **Avena fatua** Linn. Sp. Pl. 80.

Locality.—Lahore (Stewart 2677!); Rawalpindi (Ait. 569!).

Flowers.—May.

Distribution.—Temperate Europe; N. Africa; N. Asia. India—the Punjab, N.-W. Himalaya, in cultivated fields.

512. GRACILEA KOEN.

921. **Gracilea Royleana** Hook. f. in Fl. B. I. VII (1896) 284.

Locality.—Hissar bir (Harsukh 20707!; Duthie 5096!).

Flowers.—October.

Distribution.—Socotra; Nubia. India—the Punjab plains, Rajputana, Sind, Central India, Konkan, Canara.

513. CYNODON PERS.

922. **Cynodon dactylon** Pers. Syn. i, 85.

Locality.—Multan (Monro 1!); Rawalpindi (Ait. 119!); Muzaffargarh (Monro 238!).

Flowers.—August-September.

Distribution.—All warm countries. Throughout India, Burma and Ceylon, ascending to 5,000 ft., in the Himalaya. Baluchistan.

514. CHLORIS Sw.

923. **Chloris tenella** Roxb. Fl. Ind. i, 329.

Locality.—Hissar (Coldstream!).

Flowers.—October.

Distribution.—Arabia; Abyssinia. India—Rajputana, Sind, Oodeypur, Khandesh, S. India.

924. **Chloris villosa** Pers. Syn. i, 87.

Locality.—Rawalpindi (Ait. 100!).

Flowers.—July.

Distribution.—India—the Punjab, Rajputana, Sind, Oodaypore. Baluchistan; westwards to the Canaries.

515. ELEUSINE GAERTN.

925. **Eleusine flagellifera** Nees. in Linnaea XVI (1842) 220.

Locality.—Multan (Monro 21!; For. Dept. 12!; Duthie 805!); Hissar (Harsukh 20710!; Duthie 5099!); Lahore (Duthie!; For. Dept. 5!); Hansee (187!).

Flowers.—April-December.

Distribution.—Afghanistan; N. Africa. India—the Punjab plains, Rajputana, Sind. Baluchistan.

926. **Eleusine verticillata** Roxb. Fl. Ind. i, 346.

Locality.—Hissar bir (Harsukh 70703!; Duthie 5098!); Hansee (187!), Rawalpindi (Ait. 121!); Multan (Monro 4!).

Flowers.—August-October.

Distribution.—Tropical Asia; Africa and Australia. Plains of India.

927. **Eleusine aegyptiaca** Desf. Fl. Atlant. i, 85.

Locality.—Hissar bir (Duthie 5101!; Harsukh 20713!); Rawalpindi (Ait. 105!); Multan (Monro 3!).

Flowers.—August-October.

Distribution.—India—Rajputana, Sind. Burma; Ceylon; warm regions of the Old World; introduced into the New.

516. LEPTOCHLOA BEAUV.

928. **Leptochloa filiformis** Roem. & Sch. Syst. ii, 580.

Locality.—Rawalpindi (Ait. 253!).

Flowers.—September.

Distribution.—Ceylon; Tropical Asia; Africa; and America. Throughout India and Burma in the low country.

517. PAPPOPHORUM NEES.

929. **Pappophorum Aucheri** Jaub. & Spach. Ill. Pl. Orient. IV, 32, t. 323.

Locality.—Rawalpindi (Ait. 112!, Wingate!).

Flowers.—April-July.

Distribution.—Afghanistan; Persia; Turkistan. India—W. Punjab.

518. ARUNDO L.

930. **Arundo Donax** Linn. Sp. Pl. 81.

Locality.—Rawalpindi (Ait. 1135!).

Flowers.—February.

Distribution.—India—lower Himalaya and from the Punjab to Silhet, Naga Hills, Burma, the Circars, Nilgiri and Coorg Hills. Westwards to Europe; N. Africa; N. Asia.

519. PHRAGMITES TRIN.

931. **Phragmites communis** Trin. Fund. Agrost. 134.

Locality.—Rawalpindi (Ait. 258!, 256!).

Flowers.—September.

Distribution.—N. and S. temperate regions. India.

932. **Phragmites Karka** Trin. ex. Steud. Nom. Ed. ii, 324.

Locality.—Multan (Monro 40!, 354!); Rawalpindi (Ait. 258!).

Flowers.—September-October.

Distribution.—Afghanistan; Japan; Tropical Asia; Africa and Australia. Throughout India, from the Punjab to Burma and southwards to Ceylon.

520. ERAGROSTIS BEAUV.

933. **Eragrostis interrupta** Beauv. Agrost. 71 (non Roem. & Sch. nec. Trin.).

Locality.—Hissar bir (Harsukh 20714!; Duthie!); Multan (Monro 10!, 42!; For. Dept. 20!); Lahore (Monro 23!; For. Dept. 20!).

Flowers.—August-January.

* Average kind of fodder for cows and buffaloes only.

Distribution.—Mesopotamia; Tropical Africa. Throughout India, Burma and Ceylon.

934. *Eragrostis tremula* Hochst. ex Steud. Syn. Gram. 269.

Locality.—Multan (* For. Dept. 4!); Hissar bir (Duthie 5510!); Lahore—(For. Dept. 17!); Multan (Monro 231!, 390!).

Flowers.—May-August.

* Worse fodder for cattle.

Distribution.—Afghanistan; Tropical Africa. Northern India from the Punjab to Bengal and Burma and southwards to Carnatic.

935. *Eragrostis major* Host. Gram. Austr. IV, 14, t. 24.

Locality.—Hissar bir (Harsukh 20704!).

Flowers.—October.

Distribution.—Throughout the plains and lower hills of India and Burma, ascending to 5,000 ft. in the Himalaya. Ceylon; Westwards to S. Europe; Tropical and subtropical Asia.

936. *Eragrostis minor* Host. Gram. Austr. IV, 15, Fl. Austr. i, 135.

Locality.—Rawalpindi (Ait. 104!); Lahore (Cleghorn 2640!).

Flowers.—July.

Distribution.—Plains of N. India from the Punjab eastwards to Bengal, ascending the Himalaya to 8,000 ft., Sind, Rajputana, Konkan. Westwards to S. Europe and N. Asia.

937. *Eragrostis pilosa* Beauv. Agrost. 71.

Locality.—Hissar bir (Harsukh 20716!; Duthie 5109!); Multan (* For. Dept. 28!); Rawalpindi (Ait. 106!, 115!, 101!).

Flowers.—July-October.

* Average kind of fodder for cattle.

Distribution.—Ceylon; S. Europe; and most warm countries. Throughout India and Burma, ascending the Himalaya to 5,000 ft. or more.

938. *Eragrostis cynosuroides* Beauv. Agrost. 71, 162.

Locality.—Rawalpindi (Ait. 103!); Multan (* For. Dept. 18!; Monro 91!); Hissar bir (Duthie 5108!).

Flowers.—July-September.

* The roots of this as well as those of *Saccharum spontaneum* are used by Syces to enlarge their bundles of grasses.

521. AELUROPUS TRIN.

939. *Aeluropus villosus* Trin. ex C.A. Mey. Verz. Pfl. Cauc. 18.

Locality.—Multan—on saline soil (Ram Nath 49456!; Duthie 10798!; *For Dept. 7!; Monro 277!, 236!).

Flowers.—July-December.

* Good fodder.

Distribution.—Ceylon, Mediterranean region; Caspian Sea; Arabia; Persia; Afghanistan. India—Salt plains of the Punjab and Sind, sandy shores of the Deccan Peninsula.

522. POA L.

940. *Poa annua* Linn Sp. Pl. 68.

Locality.—Rawalpindi (Ait. 569!); Lahore (Stewart 2664!).

Flowers.—July.

Distribution.—Ceylon; Europe; Temperate Asia. India—throughout the temperate and subalpine Himalaya, the Khasia and Nilgiri Hills.

523. BROMUS L.

941. **Bromus tectorum** Linn. Sp. Pl. 77.*Locality*.—Rawalpindi (Wingate!).*Flowers*.—April.*Distribution*.—Europe; N. Africa; N. and W. Asia. India—W. Himalaya from Gilgit to Kumaon.

524. LOLIUM L.

942. **Lolium temulentum** Linn. Sp. Pl. 83.*Locality*.—Lahore (Stewart 2665!).*Flowers*.—March.*Distribution*.—Europe; N. Asia. India—Upper Gangetic Plain, Punjab, Sind, and W. Himalaya.

525. OROPETIUM TRIN.

943. **Oropetium Thomaëum** Trin. Fund. Agrost 98, t. 3.*Locality*.—Hissar bir (Harsukh 20711!; Duthie 5123!).*Flowers*.—August-October.*Distribution*.—Plains of India, from the Punjab to Bengal, Burma and southwards in the western Peninsula.944. **Oropetium biflorus** Stapf.*Locality*.—Hissar (Drum! 3002!).

526. TRITICUM L.

945. **Triticum vulgare** Vill. Hist. Pl. Dauph. II, 153.*Locality*.—Lahore (Stewart 2523!).*Distribution*.—India—cultivated in many parts of N. India and the Deccan Peninsula, especially in the N.-W. and upto 13,000 ft. in the Himalaya.

527. BAMBUSA SCHREB.

946. **Bambusa nana** Roxb. Fl. Ind. II, 190.*Locality*.—Lahore—Ag. Hort. Gdns. (Parker 38646!).*Flowers*.—May.*Distribution*.—Cultivated in Ceylon and many parts of India. Malay Peninsula; Native of China and Japan.

CRYPTOGAMIA.

FILICES.

528. ADIANTUM L.

947. **Adiantum capillus Veneris** L. The true Maiden Hair Fern.*Locality*.—Rawalpindi (Ait. 236!).*Flowers*.—September.*Distribution*.—Europe; Africa; America; Australia; common in gardens. India—Bombay Presidency; Madras Presidency, westside; common on banks of rivers in the plains and upto 5,000 ft.; N. India.

529. PTERIS L.

948. **Pteris longifolia** L.*Locality*.—Rawalpindi (Ait. 237!).*Sori*.—September.*Distribution*.—India—throughout Bombay and Madras Presidencies, Bengal in the Plains and upto 50,000 ft. Burma; Ceylon; widely distributed over the whole world.